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EVOLUTION OF THE CONCEPT OF FUNCTIONAL IMPERATIVES IN TALCOTT PARSONS' SOCIOLOCICAL THEORY

by

K. C. ALEXANDER

The purpose of this paper is to trace the evolution of the concept of *Functional Imperatives* in the Parsonian theory. The emergence of this concept, according to PARSONS, was preceded by five major theoretical formulations, *viz.* (1) the four System Problems; (2) the five Pattern Variables; (3) the paradigim for the classification of deviant behaviour; (4) a corresponding paradigim for the classification of aspects of social control; and (5) the theory of symbolism.

As the concept of Functional Imperatives is more or less an emergent product of these five theoretical formulations, especially of the four System Problems of BALES and Pattern Variables of PARSONS and SHILLS, we shall proceed with an examination of these concepts.

Robert BALES was concerned with the analysis of the kinds of interaction that take place in small, problem solving groups (especially experimental). He found[1] that such a group is confronted with four main "functional problems", viz. the problems of adaptation to the conditions of the external situation, of instrumental control over parts of the situation, of performance of goal oriented tasks, of management and expression of sentiments and tensions of the members, and of preserving the integration among the members as a solidary collectivity. Of the four system problems, those of adaptation and instrumental control are concerned with problem solving, whereas expression of sentiments and tension management and integration are concerned with the motivation of group members and the establishment of sufficient level of cohesiveness between members. PARSONS thinks that these four types of problems of a group are not confined to small groups alone, but are applicable to any social system, however small or however big. Therefore these four system problems formulated by BALES form the foundation of the Parsonian concept of functional imperatives.

The concept of pattern variables was developed by TALCOTT PARSONS and EDWARD SHILLS. Having originated in the Monograph, *Values, Motives and Systems of Action*[3], the concept was elaborately used in *The Social System*[4] for the analysis of the structure of social systems. The concept essentially is that in a

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1 BALES, R. F., *Interaction Process Analysis : a method for the study of small groups.*

2 That is, the maintenance of integration at personality and social system levels.

3 PARSONS, TALCOTT, *Toward a General Theory of Action.*

4 PARSONS, TALCOTT, *The Social System.*

system of action, every actor has to solve five dilemmas of alternative types of action — *i.e.* he has to make choice between five pairs of antithetical alternatives — *viz.*

(a) *Affectivity vs. Affective-Neutrality.* This is concerned with the dilemma faced by the actor as to whether in a particular situation, the need-disposition should be given vent to or whether he should abstain from action, and thus exercise discipline over the cathect.

(b) *Specificity vs. Diffuseness.* An action situation is composed of actors — ego as well as alter — and there should be some sort of relation between the two. Specificity-diffuseness variables signify two modes of defining this relationship. On the one hand ego's relationship with the alter may be confined to *a specific role or relationship*, out of a plurality of potentially possible relationships. On the other hand, there *may not be any such restriction* on the relationship between the ego and the alter. In the former case we have got specific relationship and in the latter, diffuse relationship. In other words, in a functionally *specific* relationship, if alter demands more of ego than ego is prepared to give, then alter will have to justify his demands, whereas in a *diffuse* relationship in such a situation, ego has to prove that alter's demands cannot be satisfied due to some still higher demand.

(c) *Universalism vs. Particularism.* This dilemma is concerned with the classification of the objects of the situation and thus the definition of the significance of the object or objects for ego. The dilemma that the actor is here confronted with is whether objects should be treated on the basis of some universalistic or general principles (such as woman, student, etc.) or whether it should be treated in terms of a particular relation that the actor has got with the object or objects (such as sister, friend, etc.). Essentially the dilemma is whether cognitive orientation or cathectic orientation should be given primacy. In the former case the standard is derived from the validity of a set of existential ideas, or the generality of a normative rule, while in the latter the standard is derived from the particularity of the cathectic significance of an object or of the status of an object in a relational system.

(d) *Quality vs. Performance.* This dilemma is also concerned with the classification of the social objects and thus the definition of the relation between the social object and ego. Objects can be classified together and related to ego either in terms of their *quality* — age, sex, colour etc. — or on the basis of their *performance.* What matters most is whether the emphasis should be given on who or what the person *is,* or what he *has done or can be expected to do.*

(e) *Self-Orientation Vs. Collectivity-Orientation.* This dilemma is concerned with whether the actor should give primacy to his own private interests or to those of the group to which he belongs. Self-oriented act may be oriented to any variable on the other four sets of variables. For example, a disciplined action, coming under the category of affective-neutrality, can be self-oriented. Since the demands of the superordinate collectivity are considered moral demands by PARSONS, the essential dilemma of the actor is whether he should give primacy to moral considerations or self-interests.

These are the five dilemmas that an actor has to solve in any system of action. But, PARSONS points out, actors need not weigh all the pros and cons of these alternatives before committing an action. Because of the phenomenon of institutionalization, the types of action that are required by actors in each situation is more or less institutionalized so much so that the path to be traversed by the actor in a system of action is more or less set for him. PARSONS thinks that the institutionalization of a particular combination of these five pattern-variables in a particular situation, is related to the particular function which is performed by that institution[6]. For example, in instrumentally oriented sectors of society, there will be a combination of affective-neutrality, specificity, universalism etc., whereas in an institution with expressive orientation, we find a different sort of combination. In other words, the combination of the variables of the pattern-variables is related to the functioning of the social system, and thus the concept of pattern-variables stands parallel to the four system-problems of BALES, which are also concerned with the functional problems of groups.

The dilemma of the actor essentially is how to define the *relationship among the objects in the situation* of action on the one hand, and how to define *the relationship between the actor and the objects in the situation*, on the other hand. The pattern-variables are essentially different sorts of norms for doing these two things. Thus out of the five sets of pattern-variables, the first two *viz.* affectivity and affective-neutrality, and specificity and diffuseness, are norms of defining the relationship between the actor and the objects of the situation. Universalism and particularism, and quality and performance are norms on the basis of which ego defines the objects of the situation of action. The former is called the attitudinal or cathectic pole and the latter is called the cognitive or the situational pole. Self-orientation and Collectivity-orientation constitute an independent category.

The paradigim of deviant behaviour and social control are concerned with the deviation of action from institutionally patterned lines and how such deviant behaviour is controlled.

Three important insights have been made by the theory of symbolism. The first is that every symbol has both cognitive and expressive meanings: it refers both to situational objects and events as also expresses the atttitude of the actor. However, this distinction is not one of kind, but only one of relative primacy. Secondly, every action of an actor in the process of interaction is an expressive symbol. And thirdly, for the stabilization of the interaction system, action should be organized in a meaniningful way with respect to the expressive and the cognitive meanings.

II

We have seen that the pattern-variables are classified into two polar groups, viz. those concerned with the motivational aspect of the actor and those concerned

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[5] 32 sorts of combinations are possible.

[6] It is also dependent upon the personality of the actor.

with the object situation. Even though they form two polar groups, there are intrinsic linkages between the pattern-variables at the two poles. Let us trace how PARSONS has derived these linkages.

The starting point for this is the theory of symbolism which states that every symbol has both cognitive and expressive meanings, referring respectively to the situational objects and events, and to the expression of the attitude of the actor. And, every action of the actor in the process of interaction is an expressive symbol. Such symbols, however, seldom occur in random in an interaction process, but are meaningfully organized. This organization of the symbols (i.e. actions) into systems must be done, both in the cognitive reference context as ways of ordering the object world in its significance for the actor's orientations or "interests" and in exprsesive reference context as ways of ordering his attitudes, that is his cathexes, toward objects[7].

On the cognitive side, there are two ways of organizing symbol reference (i.e. organizing unit actions into a system of action), *viz.* on the basis of universalism-particularism, and quality-performance variables. On the attitudinal side, the attitude or cathexis toward the object may be organized on the basis of universalism-particularism and affectivity-neutrality variables.

Affectivity means giving expression to a need disposition at a particular moment and its counterpart variable affective-neutrality is the inhibition of such action in the interest of the integration of action system. Whereas affective case constitutes the permission to "go ahead" with the cathect, affective-neutrality means to hold up and wait. In this latter case also, the object is cathected to, but the inhibitionary force holds sway, so that the actor does not enter into action. We may say that affectivity is directly linked with performance because according to the theory of symbolism, an action signifies a cathectic expression or the release of an impulse into overt behaviour (when looked at from the motivational or the actor's point of view) and on the other hand, the same behaviour is a performance (when looked at from the cognitive or the observer's point of view). That is to say, that affectivity and performance are one and the same thing, but viewed from two different perspectives. If affectivity and performance are paired in this way, it is but logical that the counterparts of these two variables, viz. affective-neutrality and quality should be paired together. Thus PARSONS establishes cross-cutting relationship between these two pattern-variables belonging to two poles.

Similarly there are cross-cutting relations between universalism-specificity and particularism-diffuseness variables. Universalism and particularism distinguish two different ways along which ego can establish relations to objects. Particularism is the organization of objects on the basis of common belongingness in a single relational system relative to ego. This has its expressive counterpart in the diffuse alternative, of the specificity-diffuseness pattern-variable. Here the important point is the organization of cathects, of expressive interests, in terms of their re-

[7] The actor has to define the situation and classify together and discriminate between the objects in the situation, as also has to define his attitude toward the objects of the situation.

lation to the concrete object as such. Universalism designates the organization of systems of objects cognitively by common attributes independent of the particular relational system relative to ego. They must be attributes which have the same property of commonness both to ego and to alter. There must be abstractions from the specific perspective. Similarly in the case of specificity, there must be abstraction from the plurality of the potentially possible cathectic significance of the object, to focus on a specific basis of motivational interest, ignoring other potentialities for cathecting to the object. Thus, there are links between diffuseness and particularism, and between specificity and universalism (of the cognitive and cathectic poles of the pattern-variables). To sum up this section, there are links between the variables of the attitudinal and cognitive poles of the pattern variables and these are to be found between affectivity and performance, between neutrality and quality, between specificity and universalism, and between diffuseness and particularism.

From these four inter-connecting links, the different phases of a developing system of action can be worked out. And in doing so, an attempt will be made to see how far they are related to the four system-problems of BALES. Of the four links across the poles, those between performance and affectivity, and quality and neutrality represent the dynamic aspect of the process of action. From the point of view of a cycle of action, first the system is in a "state of tension", and therefore with a given state of motivational tension, the direction of potential change of the system is toward the reduction of tension. Secondly, there is the phase of actual process of change which is formulated as affectivity or performance and as action (expression of cathect and performance) takes place in this phase, functionally it is related to the goal attainment problem of the four system-problems of BALES, and therefore we can say that the goal attainment problem and affectivity-performance deal with the same functional problems and therefore they are functionally equivalents. Thirdly, there is the stage of completion of change, which, from the point of view of what has happened in the system, of the new state, is a set of qualities of the object which compose it. On the other hand, from the point of view of what may happen in the next phase, it is a neutrality aspect of the motivational system, i.e. tension not yet released into action. This phase has the function of the expressive-problem of the four system-problems. In pattern-variable terms, this state of tension is designated by the neutrality-quality linkage. And therefore we can say that the expressive problem of the four system-problems and neutrality-quality linkage of the pattern-variables deal with the same functional problems and therefore they are functionally equivalents.

The relation of the process of action to the intrinsic features of the situation in which it takes place and its relation to the state of integration or lack of integra- of the system of action can be formulated in terms of specificity-universalism and particularism-diffuseness.

Specificity-universalism takes into account the intrinsic features of the objects of the situation in relation to their significance to the motivational gratification (affectivity-performance). The adaptive problem of the four system

problems of BALES are also concerned with the same problem of how to adapt to the conditions of the situation and thus there is functional equivalence between adaptive problem and specificity-universalism. Particularism-diffuseness link, in so far as it treats the object as a concrete entity, envisages the inclusion of alter or the collectivity in ego's particularistic relational system and the adjustment of his motivation to the integration of that system. As the integrative problem of BALES is also essentially concerned with this same problem, there is parallelism between integrative problem and particularism-diffuseness link.

The analysis of the significance of the combination of the above-named four pattern variables from the dynamic point of view thus brings out the convergence of the concept of pattern-variables of PARSONS and the concept of system-preblems of BALES.

At this point of theory, PARSONS introduces the concept of the "four dimensional action space", and points out that any particular act that takes place in a system of action can be conceived as a movement of the system along any of the four dimensions of action space, viz. (1) the instrumental goal-attainment dimension, G; (2) the expressive dimension, E; (3) the Adaptive dimension, A; and (4) the integrative dimension, I. "The dimensional schemes are ... essentially directional co-ordinates with reference to which the process of action is analysed. Motivational energy entering the system from an organism cannot simultaneously operate in all possible processes which go to make up the system... The dimensional scheme assumes that energy must either be 'stored up' in the reservoir or it must be 'expended' through transformation into gratification (satisfaction). There must be a balance between these since it is by definition (if the dimensions are independent) impossible for the same quantum of energy to go in both directions at once. Similarly, there is a basic alternative as between orientation to adaptive and to integrative exigencies. The one involves primacy of the cognitive instrumental components of the orientation system, the other of the expressive components and both cannot have primacy at the same time."[6]

III

We have seen the four dimensions within which a system of action takes place. We have also seen that a system of action is *composed* of actions moving along these four dimensions of the action space. Therefore, we can say that a system of action is a differentiated system, composed of four sub-systems. PARSONS points out that this differentiation can work out in two different ways : first it can work out in a *temporal order*. This means that the four subsystems and their processes come successively in time. And the major uniformities of the process occurring within a given period, against those uniformities that occur within other segments of time, will be called a particular *phase* of an action system. The second is the differentiation into segments which are relatively *constant through time*. Here there are different structural mechanisms performing the different

[6] PARSONS, TALCOTT, *Working Papers in the Theory of Action*, p. 166.

functions so necessary for the system maintenance, and these are called the *structural patterns* of a system of action, or a social system. This means that the phase and structural differentiations of a system of action or a social system, are derived from one and the same root, is an analysis of the same concrete phenomenon, but seen from two different perspectives, *viz.* from the dynamic and static perspectives respectively.

If a social system, or the types of actions that take place in a social system, are differentiated into four structural patterns or phases, it means that these are the essential parts of a social system and are therefore imperative for the continued existence of any social system : *i.e.* if the equilibrium or the continued existence of the system is to be maintained, these four imperatives should be met; and therefore they are called the *Functional Imperatives.*

The four functional imperatives are :
Adaptation,
Goal Attainment,
Integration, and
Latency.

The structure of a social system, as treated within the frame of reference of action, consists in institutionalized patterns of normative culture, and is relatively constant over a period of time. The given environmental situation external to a social system is also relatively constant. They are not completely static, but minor oscillations do take place. The functional problem of social systems then is concerned with those features in terms of which systematically ordered modes of adjustment operate in the changing relations between a given set of patterns of institutionally established structure in the system and a given set of properties of the relevant environing systems. The immediately environing systems of a social system are not those of the physical environment. They are, rather the other primary subsystems of the general system of action : *i.e.* the personalities of its individual members, the behaviourally organized aspects of the organism underlying those personalities, and those elements of the relevant cultural systems that are not fully institutionalized in the social system. The function of each of the imperatives to the total system may now be seen in this light :

1. ADAPTATION (A). In social systems we are concerned with goal oriented activities, and the function of adaptation is to organize the ways and means and the mobilization of the resources available in the situation of action for the realization of system goals. The key-note of adaptation is not passive adjustment to the environment. Adaptation is in relation to the values and goals of the system, and therefore it involves both passive acceptance of conditions as well as mastery of conditions. The problem of adaptation arises out of the scarcity of resources that are available for the realization of system goals, which are plural. The adaptive function is the provision of such facilities that are necessary for the achievement of goals.

There are a number of relatively concrete facilities, just as there are a number

of goals. So there is the necessity of organizing these facilities into some generalized, disposable things, so as to allocate between alternative goals. And in complex societies this disposability of facilities is achieved through the institution of money and markets. Usually these things are the focus of the economic organization of the society, whereas the function of goal-attainment is the focus of the political organization.

2. GOAL ATTAINMENT (G). Every social system has one or more goals to be achieved through co-operative efforts. The identification of the goals of subsystems of a society like that of an industrial firm is easy. But it may be rather difficult when society itself is taken as the point of reference. National security is a goal of the society. For the realization of goals, apart from adaptation to social and nonsocial environment, there is the need for the mobilization of the human and nonhuman resources, according to the specific nature of the goals.

A social system with only one goal, defined in relation to a crucial situational problem, is conceivable. Most often, however, the situation is complex, with a plurality of goals, and problems. In such cases, firstly, to protect the integrity of the system, the several goals must be arranged on a priority basis, and in a flexible manner, so as to allow for variations in the situations. And the participating individuals must be motivated to contribute what is necessary for the functioning of the system and these contributions vary according to situational exigencies : *i.e.* actors should be diffusely responsible for the attainment of system goals.

In a social system, actors performing leadership functions are more directly concerned with goal attainment. Thus in the case of a firm, the management is more concerned with the goal attainment problem. In the case of a society, it is the polity which is more directly concerned with goal attainment than any other subsystem of the society.

3. INTERGATION (I). Whereas the focus of pattern maintenance is on the unit of the system, the focus of integration is on the system, which is composed of a plurality of units. These units themselves are boundary maintaining *systems* — *i.e.* differentiated —, but are treated as undifferentiated particles for analytical purposes. Each such unit has its own contribution to the system processes. Then the functional problem of integration concerns with mutual adjustment of these "units" or subsystems, from the point of view of their "contributions", to the effective functioning of the system as a whole. Integrative function also has two aspects. On the one hand there should be solidarity or integration among the members or units themselves. On the other hand, there should be solidarity between the unit and the system; *i.e.* the members and the collectivity.

During goal oriented activities that take place in a social system, tension is generated on account of various factors, resulting in the undermining of solidarity. Conflicting individual interests, inadequate communication, etc. are some of these, and there are mechanisms of social control to mitigate the operation of

these. Conditions of co-operation, division of fruits of action, etc. also can be a source of disintegration. To cope with this, there are relational and regulative norms dictating the terms of co-operation, division of goals achieved among the units, etc.

The second problem of integration is that units should contribute to the maintenance of the system. This arises out of the need for systematically ordered modes of adjustment necessary between the social structure and the environment. There is no guarantee that the relation of a unit with other units (*i.e.* with the situation) will remain constant, and therefore there is the necessity for adjustment, either by positively controlling the relevant units or by accommodating to it. In other words, a unit should adjust its relation with other units of the situation, as the 'situation' changes. Besides, actors should be motivated to perform their duties, even if for a moment those actions are not intrinsically gratifying. Thus the problem of integration arises out of two facts: firstly, the adaptive process of goal attainment can never work perfectly. Secondly, the "output" of each unit of the system does not "stay put".

Even though all institutionalized patterns are integrative, some partial structures are more clearly and more exclusively integrative than others. Thus in a highly differentiated society, the primary focus of the integrative function is to be found in its system of legal norms and the agencies associated with its management. It governs the allocation of rights and obligations, of facilities and rewards, between different units of the complex system. Such norms facilitate internal adjustments compatible with the stability of the value system or its orderly change, as well as with adaptation to the shifting demands of the external situation. The institutionalization of money and power are primarily integrative phenomena, like other mechanisms of social control in the narrower sense.

4. PATTERN MAINTENANCE OR LATENCY (L). "The function of pattern maintenance refers to the imperative of maintaining the stability of the patterns of institutionalized culture defining the structure of the system". The value system is the foundation of the social structure, and in so far as this is so, the function of pattern maintenance ultimately means the maintenance of the value system. This involves two things: on the one hand, institutionalized values should be stabilized at the cultural level, through processes which articulate values with the belief system (i.e. religious beliefs, ideology etc.) and thus the potentialities for the disintegation of the value system are reduced. Religious rituals in so far as they are symbolic expression and recreation of the values of the society, facilitate the stabilization of the value system of the society. On the other hand, for the maintenance of the culture and thus of the social structure, besides the stabilization of the value system, there should be socialization also, so that institutionalized cultural patterns can be maintained. This is the pattern maintenance aspect of latency. Another aspect is the one concerned with the management of tensions occurring within the subsystem (*i. e.* unit of the system). This arises out of the fact that a social system does not satisfy all the needs of all the actors and therefore commitments to the values are subject to different kinds of strain, and these "strains" should be managed, if the units are

to be able to carry on effectively. Religion, art, family, etc. enable people to reduce anxiety and thus keep them in good working condition.

The problem of pattern maintenance has arisen on the one hand becaus of the possibility for the new value elements to enter into the system, making the cultural system incongruous, and because of the transient nature of human beings, contrasted with the relative permanence of culture, which necessitates the passing on of culture from generation to generation.

We have seen that these four imperatives may occur in subsequent phases or as different units of the social structure. Thus, our days start with work by which we earn wages (adaptation); with the facilities so procured, we lead a mode of life symbolically significant (goal attainment); in the evening members of the family who were away for different modes of adaptive functions, gather together, have chit chats, dine together, pray to a common god. Finally, they retire and thus recoup for the next cycle of activities. If we take weekly or yearly cycles of life, we can see more or less the same phases. Thus from Monday to Saturday, all are engaged in work and in that way to adaptive functions. On the week-end, holiday comes, and they enage in different sorts of intrinsically pleasure giving activities by spending the income earned during the week. Week-ends also enable the strengthening of solidarity of members. Finally, the worship in the church, the picknic, etc. are also there, which facilitate pattern maintenance and tension management.

When things are viewed from the structural point of view (and society as the point of reference) factories, business organizations and in a sense the whole economy, have got adaptive functions. Facilities so created are distributed in a unviversally disposable form, viz. money. The polity including the state is concerned with the goal achievement problems–five year plans, overthrowing the Chinese etc. Then there are Republic Days, Shivaratris, Dipavalis, etc. etc. and the celebration of all these integrates the people. The institutions like family, church, theatres, brothels, etc. are concerned with pattern maintenance and tension management. If we take any other social system as the point of reference, we can see still the working of all the four imperatives. Thus for students, with passing examination as the goal, first there is the period of studying (adaptation); this is followed by the writing of examinations and the getting of degrees concerned (goal attainment). But during the course of study, the relation between the teacher and the student, and between students themselves, might have been strained and all such strains are patched up by annual socials, etc. Finally comes the vacation when many of the strains and tensions of studying for a year are solved and thus the student is made ready for the next academic year.

It can be seen in this way that the four functional imperatives have got universal validity and this concept represents a mile-stone in the development of sociological theory.

REFERENCE GROUP THEORY WITH REGARD TO MOBILITY WITHIN CASTE

by

Y. B. DAMLE

I propose to discuss the phenomenon of mobility within the caste system in the light of the Reference Group Theory, examining its utility as an operational theory in a Caste society.

REFERENCE GROUP THEORY

Reference Group Theory may be particularly useful in conceptionalizing and understanding mobility within Caste. The theory concerns itself with analyzing the frames of reference for an individual's behaviour and may therefore be looked to for explaining social dynamics. I propose to lay down the salient features of theory as these seem relevant to mobility within Caste. I am drawing heavily on MERTON's presentation of the theory (*Social Theory and Social Structure*, Chs. VIII and IX, 1957), since, I find it to be illuminating for sociological analysis.

The impact of one's own group upon behaviour has long been noted and accompanies the concept that rewards flow from conformity. Furthermore, the selection of a Reference Individual, attempting to identify with another person, has also long been established,— even the fact that the selected individual often belongs to another group.

However, the impact of groups other than one's own, involving a more complicated process of identification, was neglected by the earlier sociologists in their conceptual dichotomizing of "in-group" and "out-group". "Reference Group Theory which systematically takes account of positive orientations towards non-membership groups can serve as a corrective of this prematurely restricted conclusion. In-Groups and Out-Groups are often sub-groups within a larger social organization, and are always *potentially* so, since a new social integration can encompass previously separated groups"[1].

Selection of Reference Groups from groups other than ego's is largely governed by the institutional structure of the society. A group has less chance of being selected as a Reference Group, the smaller the extent of its internal cohesion, the smaller its influence *vis-a-vis* other groups, and the less prestige it confers relative to other groups. The greater the structural strength of one's own group, the slighter are the chances that an outside group will be selected as a Reference Group.

Isolates in a group are regarded as particularly prone to adopt the values of other (non-membership) groups. This can apply to non-mobile persons who

1 MERTON, R. K., *Social Theory and Social Structure*, (1957,) pp. 298-299.

are relatively isolated and even to disenchanted members of the elite. In this context, attention may be called to the renunciation of higher class status by certain persons in favour of the status of "leader of the masses," — the topdogs who prefer to cast their lot with the underdogs.

A group may also be selected as a *negative* Reference Group, where the attempt is to avoid all identification with it. Indeed, selection of one group as a frame of reference may entail just such rejection of another. Thus , where a person voluntarily discontinues being a member of a group, he may proceed to shun its values and norms.

In this sense, Reference Group behaviour may involve nonconformity to the norms of a negative Reference Group (often, but not necessarily, ego's original membership group) and conformity to the norms of a positive Reference Group (often a nonmembership group for ego). Thus, Reference Group behaviour depends to a large extent on the social visibility of the norms prevailing in one's own and in other groups and on the extent to which the members of groups live up to their norms. "There must be patterned ways in which people become acquainted with the norms and activities in the groups which they select as evaluative and comparative frames of reference"[2].

Reference Group Theory elucidates change in group membership, where this is possible, through the process of anticipatory socialization. Given the possibility of ultimate inclusion or absorption into another group's membership, such anticipatory socialization would be functional for the individual, though, no doubt, the very same process would be a dysfunctional defection for ego's original membership group. But there may be significant differences in the eligibility, as well as in the motivations and aspirations, of persons to become members of groups other than their own[3]. A person who cannot become a member of another group, despite his intense motivation and aspiration to do so, may develop vehement hostility towards that group. Thus, positive orientation towards nonmembership groups and their selection as Reference Groups has been regarded as correlated with a high rate of social mobility and the openness of groups.

To summarize : the internal structure of groups and their relationship to the external structure and organization of society, including the social visibility of their norms, will determine their selection or rejection as Reference Groups. The social organization may promote the visibility of alternative norms and values by providing channels or social mechanisms of communication between groups. By blocking such communication it may withhold visibility. Finally, Reference Group behaviour is significantly related to whether the groups which characterize a society are open or closed.

Having listed a number of structural variables important to the analysis of Reference Group behaviour, and particularly important in the selection of posi-

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2. *Op. cit.* p. 351.

3 *Op. cit,* pp. 288-297.

tive and negative Reference Groups, it will be instructive to apply Reference Group Theory to a society which is structured by caste divisions.

MOBILITY WITHIN CASTE SYSTEM AND PATTERN VARIABLES

The Caste system is characterized by relative immobility. Various points of view, not to say "theories", have been presented by different students of Caste regarding mobility within the Caste system, ranging from the extreme view that the Caste system precludes all mobility to a realistic appraisal of the situation *viz.* that the Caste system allows a small rate of mobility.

The problem of the analysis of mobility within the Caste system is, to my mind, complicated due to the operation of distinct levels at the same time, e.g. the Rural and the Urban, the Synchronic and the Diachronic. If only one could separate the levels, it would be much easier to analyse the problem. Below is given a schematic presentation of the various levels of analysis.[4]

I think that the presentation of the different points of view regarding mobility within the Caste system in terms of Parsonian Pattern Variables will greatly facilitate the analytical process of separation of the levels mentioned above. The logic of the use of pattern variables will become clear as the discussion proceeds.

Pattern Variables and the Corresponding Points of View Regarding Mobility within the Caste System

A	A 1
Affectivity vs. Affective Neutrality	Little Tradition vs. Great Tradition
B	B 1
Self vs. Collectivity	Jati vs. Varna
C	C 1
Particularism vs. Universalism	Attributional vs. Interactional
D	D 1
Ascription vs. Achievement	Fixed status vs. Changeable status (in terms of birth) (through achievement)
E	E 1
Specificity vs. Diffuseness	Brahaminisation vs. Secularisation

Before proceeding to discuss the logic of the use of Pattern Variables to points of view regarding mobility within the Caste system, it needs to be noted that excepting the pair E 1, all other pairs under the columns A 1, B 1, C 1, and D1 indicate the polar situation of immobility and mobility. While Brahminisation itself may smack of mobility, though in a single direction, it has to be remembered that Brahminhood can be attained only by birth. Therefore in a realistic manner the pair

4 I gratefully acknowledge the help rendered by Prof. CORA DUBOIS in working out the schematic presentation. The paper has benefitted a great deal by her searching criticism and helpful suggestions.

Brahminisation and Secularisation is used to indicate the polar extremes of immobility and mobility.

Further, it should also be noted that the pairs under columns A 1 to E 1, by and large, denote the Rural and the Urban levels. Thus Little Tradition refers to rural society, while the Great Tradition is purely an Urban phenomenon. Jati is more relevant in the rural society, while Varna is relevant in the urban situation. Attributes of caste cling to a person in rural society, while in the urban set up a person tends to be judged by his actual behaviour and action. The status of a person is determined by his caste in rural society, while in urban society it can be manipulated by achievement. As mentioned earlier in the rural set up the ritual status of a Brahmin, in spite of the fact that it cannot be attained except by birth, becomes a matter of emulation and striving for, whereas in the urban situation the play of secular forces opens out possibilities of mobility, which may not bear any relationship to the caste statuses. Thus an untouchable can become a Minister at the state or central level in India. Occupational roles in an urban setup may bear no relationship whatsoever to caste statuses.

The Caste system is obviously a relational system having significance for roles and the relationships amongst the various roles, thus linking up the ego with the alter. The Pattern Variables are precisely meant to explain the relational aspect of the role structure of social system. It is well known that the Caste system is extremely significant for the social system in India in so far as it is largely responsible for designing the role structure. In fact, one may logically treat the Caste system as a social system wherein networks of structured roles and statuses, i. e. institutions are meshed in. Naturally the various dilemmas to the treatment of which the Pattern Variables have been designed are to be found in the Caste system too. The dilemmas of (a) gratification vs. discipline, (b) primacy of cathectic orientation vs. cognitive orientation, (c) quality vs. performance, and (d) the dilemma posed by the scope of significance of object *viz.* specificity vs. diffuseness are completely relevant to the Caste system.

Further, it has to be borne in mind that the Caste system has various dimensions such as the rural and the urban, the weight of a highly developed old tradition and the force of modernism, etc. The relational aspect of the Caste system is complicated by the dimensions mentioned above. As I have mentioned earlier the rural and the urban dimensions are reflected in the pairs A 1 to E 1, those on the left being rural and those on the right being urban. As regards the dimension of time, it is reflected in the pairs A 1 and B1 and C1 to E 1. The first two pairs denote the impact of older traditions while the last three pairs indicate the impact of modernism. Even today the Little Tradition is to be found in the villages of India.

Moreover, the relational aspect of the Caste system is complicated by the possibilities of mobility within caste in terms of the pairs mentioned above. Thus, those belonging to the Little Tradition can move up to the Great Tradition. A given Jati has a fixed status in the rural environment in so far as its position in the caste hierarchy is concerned. However, on shifting to an urban environment,

sucha Jati gets incorporated into Varna complex and attains status equivalent to other a Jatis in the same Varna category. In a relatively closed system as exemplified by rural units one's status is determined by the attributes of his caste, while in an open system, i.e. urban society, one's status depends on actual interaction. For example, the status of a Brahmin would tend to be very high in the rural society, irrespective of his merit, while in urban society, his status would depend on his occupation, education etc. A person belonging to a low caste would suffer from low status in the rural set - up, no matter whatever his qualifications and attainments may be. He would be debarred from equalitarian type of interaction with other castes. The same person would be interacting freely and on terms of equality with his peers in the urban society, regardless of Caste differences. The ascriptive basis of caste is firmly rooted in rural society, thereby determining a person's status irrespective of performance. In the urban set - up, however, status can be achieved by conforming to objective criteria such as education, occupation, wealth, etc. Brahmin is regarded as the apex of the caste system more so in rural society and therefore the Brahmanic model of behaviour is sought to be imitated, though it cannot be adopted completely. In the urban situation secular forces are operative and there are many avenues for advancement by resorting to relevant ways of behaviour, which may have no relevance at all for the caste hierarchy.

The pairs A 1 to E 1 denoting immobility and mobility also represent the various dilemmas mentioned above. The Little Tradition exemplifies a situation wherein a person can satisfy his gratifications without much concern for adherence to higher standards. This is facilitated by the informal organization and by the operation of a variety of standards. In the Great Tradition, however, conformity to higher standards is emphasized and thus gratification gets postponed. Activity tends to be of an instrumental nature, rather than immediately gratificatory. Discipline is emphasized due to the complexity of organization and a formal structure. Correct behaviour and adherence to higher standards are necessitated. Yet, the Great Tradition also opens out avenues for advancement. Thus, the Little Tradition and the Great Tradition represent the pair Affectivity and Affective Neutrality.

Jati characterizes one's intimate group in a rural set-up and one is identified with one's Jati. Jati caters to the satisfaction of the needs of its members. Jati is a major reference point for action. Varna, on the other hand, is a conglomeration of units (Jatis) which are more or less equivalent as far as a given category goes. Varna thus puts premium on discipline. Jati can be well likened to self, while Varna to Collectivity. Jati is a narrow entity, while Varna is a broader group. Thus gratification and discipline are emphasized by the Jati and Varna respectively. Varna also opens out avenues for advancement, though emphasizing again the instrumental nature of activity. The dilemma pertaining to Gratification and Discipline is well exemplified by the two pairs considered above.

In a situation where one's status is determined by the attributes of his caste, the relational complex is highly determinate in terms of the value system. Thus one is judged in relation to his caste attributes and not in relation to his actual

capacity and action. This situation obtains preponderantly in rural society. The relational system is already determined in terms of the attributes of different castes. The primacy of cathectic orientation, based on value standards associated with castes, is thus obvious in this situation. Orientation is clearly subjective. On the other hand, in a situation where capacity and action are emphasized, rather than the caste attributes, reliance is placed on objective standards and criteria. The primacy of cognitive orientation in such a situation is quite clear. Such a situation holds good in the case of urban society. A system which puts emphasis on attributes is therefore clearly particularistic in orientation, while a system which emphasizes interaction (in terms of capacity and actual action) is universalistic in orientation. It needs hardly to be pointed out that the system with particularistic orientation precludes mobility, while the system with universalistic orientation facilitates mobility. The dilemma regarding orientation is well reflected in the pair discussed here.

A system, wherein status is fixed at birth by one's caste, is primarily concerned with quality (which is associated with caste) rather than performance. Consequently, the relational system is once again determinate and not amenable to change. Such is the situation in a rural society where the status of a person is fixed once and for all at birth in terms of his caste. The ascriptive basis is very clear. In an urban society status is manipulable by achievement. As such mobility is facilitated. The relational system is amenable to change. The basis of status is Achievement. This represents the dilemma of Modality.

The relational system in rural society is characterized by the predominating value attached to Brahmanical status. The scope of the significance of object to an ego is very specific under such circumstances. Nearness to or distance from Brahmins becomes a major criterion of social acceptability. The relational system is geared to a single value standard. As mentioned earlier, Brahmanhood cannot be attained, except by birth. Under such circumstances mobility is utterly impossible. In urban society the play of secular forces opens out avenues for different standards of value and thus facilitates mobility and social advancement, irrespective of caste. The scope of the significance is much more diversified and therefore diffused in character. Various permutations and combinations of the forces and criteria are possible for social advancement. The relational system, being open, is much more dynamic. Thus the dilemma of the scope of significance of object in terms of specificity and diffuseness is exemplified by rural and urban society in terms of Brahminisation and Secularisation.

I have mentioned earlier how, analytically speaking, distinction should be made between the rural and the urban dimension and the time dimension in terms of earlier and modern times in order to understand the problem of mobility within the Caste system. I have also mentioned how change from one dimension to another has been taking place. A schematic presentation has been given below, indicating the dimensions and change. I have advisedly used the categories *Then* and *Now* to denote time — earlier and modern.

A. Rural Social System

A 1 Then	A 2 Now (in addition to the earlier features)
Little Tradition	Great Tradition
(Affectivity)	(Affective Neutrality)
Jati	Varna
(Self)	(Collectivity)
Attributional	Secularisation
(Particularistic)	(Diffuseness)
Fixed Status	
(Ascriptive)	
Brahminisation	
(Specificity)	

B. Urban Social System

B 1 Then	B 2 Now (in addition to the earlier features)
Great Tradition	Interactional
(Affective Neutrality)	(Universalistic)
Varna	Changeable Status
(Collectivity)	(Achievement)
	Secularisation
	(Diffuseness)

Two qualifications must be added to the schematic presentation. First, that in the case of the Rural Social System the Great Tradition and Varna have always acted as ultimate reference points even in the earlier times and that even in the modern times there is an interplay between all the features mentioned in Box A 1, and the new features mentioned in Box A 2. It is also necessary to add that secularisation has made the least impact, except at the verbal level[5]. Second, that in the case of the Urban Social System even in the modern times the Great Tradition and Varna continue to act as background features, and that the features mentioned in the Box B 2 are not completely effective for all the layers of the population. It would be of interest to point out that the higher castes have been much more influenced by modern forces as exemplified by universalistic orientation, emphasis on achievement and diffuseness than the lower castes. Likewise, the higher castes carry the backlog of Great Tradition and Varna in their minds. Nevertheless, a climate of opinion has been created whereby the features mentioned in Box B 2 are accepted by people belonging to higher and lower castes.

Having discussed the problem of dimensions, it remains for us to discuss

[5] This is rendered possible due to the linking up of Rural and Urban society through development of roads and communication systems. Cf. Y. B. Damle, "*Communication of Modern Ideas and Knowledge in Indian Villages*," 1955 and Y. B. Damle and I. Karve, " *Intergroup Relations 1961*.

the problem of the nature of change with special reference to mobility. The question we have to ask ourselves is whether the change indicated in pairs C 1 to E 1 in particular is a change within the social system or a change of the system itself. Obviously in this case by social system is meant the caste system. It is true that the change in orientation, modality and scope of the significance of object that has come about, can be largely attributed to the impact of the western world. The expanding opportunities and liberalisation of attitude consequent upon technological development and exposure to new ideas has greatly accelerated the process of mobility. Nevertheless it has to be remembered that even in the urban areas the caste system continues to obtain, though in a modified form. As I have pointed out[6], the Caste system facilitates meeting other people at a tangent. No matter how great the extent of liberalisation may be, one can always withdraw oneself in the shell of one's caste, particularly in the sphere of marriage and kinship. The change in orientation, modality, etc. mentioned above has modified the caste system. The caste system has accommodated itself to the process of secularisation. The caste system has not broken down, whatever may be the factors responsible for that such as the lack of industrialisation, hold of the family system, economic backwardness of the country, hold of traditional values, etc. Besides I have already mentioned as to how the change referred to above is not effective for all the layers of the urban society and that the Great Tradition and Varna continue to provide the background for reference. Moreover, the higher castes have been most affected by the change mentioned above. The higher castes thus can have the cake and eat it too in the sense that they have played an important role in the Great Tradition and Varna complex and also play a major role in terms of secularisation. It can be said that the higher castes in the urban society constitute a dual reference group. Thus, one has really to talk in terms of a change within the system rather than of a change of the system as such.

Therefore, it is perfectly logical and legitimate to employ the pattern variables, which are presumably meant to be employed only in the analysis of a system as a going concern, for analyzing the problem of mobility within the caste system. The Pattern Variables have really helped clarify the various dimensions of analysis of mobility. By doing so the reference groups to be discussed have been brought into a sharp focus.

Reference Group Theory and Mobility within the Caste System

Reference Group Theory sets forth the prerequisites for positive orientation in an open system, where ultimate inclusion in the non-membership group is possible[7]. The Caste system is characterized as a closed system, where ultimate inclusion is not ordinarily possible. Under these circumstances would positive orientation to a caste group other than one's own be dysfunctional for the person or the social system? The paradox of caste lies in the fact that, although there can be no expectation on the part of persons of the lower castes to be ultimately

[6] Y. B. Damle, "*A Review of Literature on Caste.*" p. 20.

[7] Merton, *op. cit.*, p. 293.

included in the higher castes and also because there is no such fear in the minds of the higher castes, positive orientation for reference purposes and imitation is permitted and even encouraged. In this context, anticipatory socialization is really a matter of reducing repulsion rather than that of promoting absorption or inclusion. To cite an example, one may refer to the facility with which a vegetarian non-Brahmin is received as a guest in the house of a Brahmin in a small town. There the consequence is to reduce distance and repulsion, but not to promote ultimate inclusion. In yet another way anticipatory socialization can be functional for the persons concerned, e.g. where persons shift from the Jati complex to the Varna complex. This means a change of dimension really. The various Jatis composing a Varna are supposedly on the footing of equality. The movement of a Jati or some members of a Jati to the Varna complex higher than its original one constitutes mobility. Yet it does not mean absorption in higher Jatis.

Even at the cost of repetition, it would be useful to spell out the various reference groups and their implications for mobility within the Caste system, based on the preceding analysis. Keeping in mind the Rural-Urban dimension one can see that the Rural society tends to have its own groups as reference groups, except in the case of Brahminisation. Bearing in mind the time dimension, one has to remember that in modern times the Great Tradition and the Varna complex and to a certain extent the process of secularisation (all pertinent to Urban Society) have provided Reference Groups to rural society, thus in a way holding out possibilities of mobility. These Reference Groups have consequences for the gratification-discipline dilemma and the dilemma of the scope of the significance of the object, to a very negligible extent though. The prerequisite for the effectiveness of these Reference Groups, however, is the movement of people to and fro from rural to urban society, coupled with the facilities of migration to urban areas. It really means a change in the dimension for all practical purposes[8].

Thus the Great Tradition imposes certain types of restriction with regard to the practice of Hinduism. A purer version of Hindu rites and rituals has to be adhered to. Simultaneously it means the shedding of certain tribal and purely local practices. As an example one may cite the example of the rigourous adherence to details of worshipping of certain deities required on the part of the migrants to urban areas. In the rural society, on the other hand, the Little Tradition, with all its varieties and permissibilities, continues even today.

Brahminhood can be attained only by birth, at least in the sense of absorption into the caste. Untouchability even today constitutes an insurmountable barrier to mobility[9]. Leaving aside the topmost and the lowermost rungs of the caste hierarchy, the Varna as a Reference Group holds out possibilities of mobility in terms of the Sudra, Vaisya and the Kingly models for the rural people. Traditionally certain occupations have been open to all and sundry, e. g. cultivation of land.

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[8] Cf. DAMLE, Y. B. and KARVE, I., "*Intergroup Relations*" where the importance of the Rural-Urban dimension becomes evident for liberalisation of attitudes.

[9] DAMLE, Y. B., "*A Review of Literature on Caste,*" p. 26.

The concept of the Dominant Caste has been stressed of late to pinpoint the importance of political and economic power in rural society. A caste, with the help of its numerical strength and politico-economic power can raise its ritual status. Not only that but Brahmins, who are supposed to be ritually the highest, have to look up to the dominant caste for protection. Thus, the ritual rank of Brahmins is said to be of no avail, unless it is accompanied by high secular rank. SRINIVAS has reported such a state of affairs[10]. It is, to my mind, clearly a case of the Kingly Model being effective as a Reference Group. Trading and commercial activities can also be resorted to by any touchable caste. The Vaisya Model can thus be chosen as a Reference Group by any caste Hindu, theoretically speaking. Though in practice there tends to be a Vaisya caste in every suitable village, resorting to such activity.

Thus, except for the Kingly Model, there is no other Reference Group which holds out even a remote possibility of absorption into a higher Varna complex. Even in the case of the Kingly Model, the caste concerned has to carry on a relentless struggle to attain higher ritual status and acceptability in the Kshatriya Varna complex. This does not in any way mean absorption into higer castes. All that really happens is that one more caste is added to the Varna complex.

Secularisation has made very little impact, except at a verbal level, on rural society[11]. However, with the help and encouragement by state, the untouchables have been attempting to raise their status by changing their names. In Maharashtra it is common, particularly in the case of persons belonging to lower castes, to call persons by their caste names. The caste name is treated as a family name, e. g. Ganpat Mahar, Shiva Chambhar, Namdeo Bharadi, etc., thus revealing the caste identity of the persons concerned. In order to obliterate caste distinctions, the Government of Bombay facilitated change of names so that the caste identity may not be revealed. I understand that in a village in the Kolhapur District, Maharashtra State, six persons, all untouchables, changed their names in order to ensure a change in their rank position. It is reported that as a result their rank status improved. For want of actual investigation into the matter, I cannot accept the validity of the report. The instance is, however, cited just to point towards the development of new Reference Groups, particularly with state backing. Active contact with urban society, not to say power, is thus necessary for the process of secularisation to make any progress in rural society.

As for the Urban Society, taking into account the time dimension, the Great Tradition and the Varna complex provided the Reference Groups in earlier times. In modern times, however, the emphasis on cognitive orientation, performance and the diffuseness of the scope of significiance of the object set up different types of Reference Groups. Thus, emphasis is placed on limiting the particularistic tendencies embodied in the caste system. The step taken by the Government of India to abolish the entry of caste in any government record may be cited as an

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10 SRINIVAS, M. N., "The Dominant Caste in Rampura," *American Anthropologist*, 61:1-16, 1959

11 Y. B. DAMLE and I. KARVE, *op. cit.*

example of such efforts. Every effort is made to promote universalistic orientation, which again is exemplified by the governmental effort to throw open public places of worship to everyone, irrespective of caste. Broadly, it may be said that Liberal Group is chosen as Reference Group. It should be added here that liberal attitude has been inculcated in India through her contact with the western civilization and the untiring efforts of her leaders like Mahatma Gandhi. The increasing emphasis on performance makes for the choice of objective criteria for determining status. Thus education and training, skill and capacity, etc. come to be emphasized rather than caste for determining one's status. Here again, efforts are made to limit the role of caste. Thus, recruitment to posts is made irrespective of caste. The emphasis is clearly on performance and achievement. The state has actively pursued this policy. Objective criteria are emphasized, thereby promoting mobility. The Reference Group is clearly provided by western civilization. The process of secularisation, with its emphasis on the diffuseness of the scope of the significance of the object, further delimits the trammels of caste society. Here, too, the state in India has promoted such development by declaring India to be a Secular State. Secularisation logically means eschewing of caste as a determinant of status. In this context the desire and the efforts on the part of some members of the higher castes to dissociate themselves completely from caste organizations must be mentioned. That the top leadership of the Labour Movement has been confined to higher castes is a case in point. The increasing emphasis on objective forces has helped mobility a great deal. A variety of careers are open to people in terms of which they can ensure a rise in their status. A person can choose a career, irrespective of his caste. The migration of the lower castes to Urban Society has become meaningful for them only due to this. For in Urban Society, the lower castes are not subject to restrictions of caste in the choice of a career. There is a wide variety of Groups which can be chosen as Reference Groups.

However, it must be reiterated that such a situation does not hold good for all the layers in the Urban Society. For certain sections of people, particularly the recent immigrants, the Great Tradition and the Varna complex, still are the Reference Groups and therefore provide but limited avenues of mobility within caste. Second, in so far as the layers most affected by the development mentioned above have belonged to the higher castes, a complete disregard of caste is not feasible. Therefore the change that comes about is a change within the system and not of the system. In this context, I would like to pursue the point mentioned earlier, *viz.* that the higher castes constitute a dual reference group in so far as they are also the most affected layer by the process of liberalisation, modernization etc. I think, it is of great significance to mention here that in Poona (Maharashtra State) certain typical Brahmin names were adopted by some students in the Backward Class Hostels, notwithstanding the injustices meted out to the untouchables by Brahmins. This opens possibilities of ambivalent attitudes towards the Brahmin reference group due to the desire to identify with the Brahmin group due to its secularisation and prestige and the accompanying hostility towards Brahmins due to their superordination and arrogance. Thus a group is chosen as a reference group with a great deal of misgivings and reservations.

Concluding Remarks

We have discussed the various Reference Groups and their implications for mobility within the Caste system. Now it remains for us to examine whether the selection or rejection of reference groups is in itself dependent on the nature of the social structure and the visibility of norms and values, etc. The question will be examined with reference to the two dimensions mentioned above. To start with we discuss the Rural-Urban dimension. In the case of the rural society, we note that a significant change in the social structure has not come about in so far as kinship and caste continue to provide the predominant reference groups. By and large we get a picture of immobility. The interplay of ritual and secular forces makes for the acceptance of the *status quo* of the caste hierarchy. It is true that the rural society has been of late exposed more to the Great Tradition and Varna complex due to the increasing contact with the urban society. In this case the choice of reference groups is facilitated by the visibility of norms and by the nature of the social structure. I have mentioned earlier that secularization has made but little progress, if at all. So the reference groups chosen tend to promote only a small rate of mobility. Even in respect of the urban society, the system of stratification curbs the wide spreading of universalistic orientation, emphasis on achievement and diffuseness. It should , however, be mentioned that the constitutional and legal standbys, coupled with a freer system of communication and interaction render possible the selection of groups other than one's membership group as reference groups. I have already mentioned how the model in terms of secularization is open to all. I have also mentioned how inasmuch as the higher castes have so far had a monopoly of being exposed to modern, liberalizing forces, complications are likely to arise in effective mobility. There is no doubt increasing emphasis on achievement and to that extent the possibility of a wide choice of reference groups. But in view of the operation of traditional and modern forces simultaneously, such choice tends to be limited. The social structure limits visibility of alternate values and norms.

As for the time dimension, there is no doubt that of late the urban society has been affected by the forces of universalism, achievement and diffuseness that before. Hence, the choice of reference groups has increased.

To summarize the discussion one can say that the rural society is governed by forces such as the Little Tradition, the Jati, particularistic orientation and dependence on caste attributes, ascriptive basis of status, specificity in terms of Brahminisation and as such offer very little in respect of reference groups and of mobility. In so far as the Rural Society is exposed to the Great Tradition and the Varna complex, some choice is possible in respect of reference groups and some measure of mobility too is possible. The urban society offers a wider variety of reference groups and promotes mobility. In the urban society the increasing exposure to forces of universalism, achievement basis of status and diffuseness facilitate the choice of reference groups and mobility. Though even here the nature of the social structure puts limitations on such choice and on the rate of mobility. The change is within the system.

A NOTE ON SOME WALL PATTERNS

by

M. S. MATE

The purpose of this note is to record a type of ornamentation in brick structures practised during the late Maratha period.[1] This mode continued to be used in later years also. It is worth looking into not because it has any tall claims on aesthetic graces. It deserves attention in so far as it is what might be called a 'popular' art form as apart from the forms utilised by wealthier classes and in wealthier places. It is something refreshing. The higher or elite forms are necessarily influenced by various art traditions, methods and motifs. As such in most cases a certain amount of repetition of forms and ideas becomes inevitable. Uniformity plays a role not properly emphasised in our art studies. The form now to be discussed is a thing out of this rut. Its sphere is limited, but within that sphere there is a lot of experimenting, a good deal of imagination. It is almost certain that in other regions where brick was used for construction similar methods and techniques were used. However, since our entire attention is focused on the higher forms, they seem to have missed the attention of the students in the field.

A glance at the past reveals some factors. The earliest extant remains of brick structures from the Deccan reach back to the seventh and eighth centuries. The most comeplete specimens are represented by the temples of Trivikram, Kalleshvar and Uttareshvar at Ter in the Osmanabad district of Maharashtra. The others are the ruins of an apsidal brick temple at Harni and a smal temple at Parinche in the Poona district of the same state. The ornamentation of these structures consists mostly of moulded brick-work. The mouldings take the form of pilasters as on the Trivikram temple at Ter and the conventionalised Chaitya motifs as seen on the Parinche temple. Of course, the normal mouldings that run around the temple structure are there. Remains at both the places show that the brick work was covered by plaster and probably colour also. This method of brick construction and ornamentation was in keeping with the then contemporary fashion throughout India.

A period of nearly five centuries elapses before one comes across brick structures again. This is the period during which COUSEN's '*Medieval Temples*' were erected. And it is quite likely that the emphasis on stone work was so heavy that very little of brick construction in the sphere of religious architecture took

[1] Excavated remains of around the 3rd Century A.D. have revealed the utilisation of bricks prepared out of earth of different colours in order to bring some ornamental aspect. See : HANNA RYDH, *Rang Mahal*, 67, pl. 7: 2.

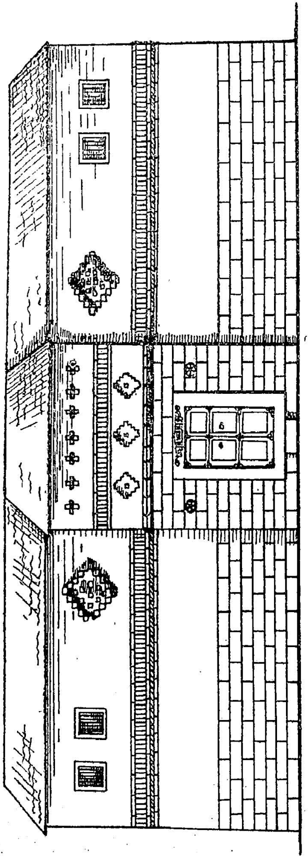


Figure 1

place. Often the shikhars of these temples were in brick and for them moulded brick was utilised. Brick must have played the dominant role in domestic architecture, but dated examples are conspicuous by their absence. The next phase is represented by structures erected during the Islamic rule. Most of the Islamic buildings of the region are in stone and wherever they are to be seen in brick the mode of decoration is altogether different. In the first place cut-plaster or stucco work displaces the moulded brick-work of the previous centuries. Examples of pleasing stucco-work are found in all the Deccani capitals of the medieval period, the best ones to be seen being at Golconda. Another and an altogether novel innovation was the mosaic or glazed tile work that was imported from Persia and used on the largest scale at Bidar. Here the entire facade of the Madrasa of Mahmud Gawan was covered with patterns of rich hues. Colour-work on walls was all along practised and even to date the remains of most of the Deccani capitals preserve to some extent the colour work of those days.

The late medieval or the Maratha period saw the reappearance of brick on a large scale. Not only the palaces and mansions but also temples were built in brick. The shikhars of the latter being as a rule always in brick. However, unlike the earlier Islamic works, these structures avoided as far as possible the use of the arcuated method and resorted to timber and brick construction. In the case of domestic architecture, only some components of the building like the staircases etc. were supported by arches, at all other places wood displaced arched construction. This means a new venue was opened for building ornamentation. Heavy columns of timber supported generally ponderous bracket-capitals of the same material who in their turn bore the burden of the beams and the ceiling. The masonry arches and balconies of Bijapur were avoided and wooden imitations of the same features adorned the Maratha buildings. A lot of attention was lavished on wooden brackets, pillars, arches, pendants and ceilings. A mixture of Guja rati and Delhi styles came into vouge. In short, most of the places where stucco had any part to play in domestic architecture were occupied by wood. In the case of temples the case is slightly different. Here stone, brick and arched construction were all employed and consequently one finds a good deal of stucco work on the temples. Special attention was devoted to the shikhars which were entirely brick-built. Certain geometric forms and floral patterns from the Islamic period continued to be in use, but much more attention was devoted to figure-moulding and imagery in stucco. Images of gods and goddesses, mendicants and sadhus, and a great variety of animals like the tigers, elephants were fitted into the shikhar scheme. These were again painted over.

The designs and modes of decoration that are to be considered now deserve attention in as much as they are the results of the endeavours of a not too skilled mason to impart some grace to his handiwork. In this task he had very little use of the traditional forms and methods. Perhaps they never reached him. Secondly his choice was extremely limited. He could not utilise stucco nor could ordinarily count on the services of brick-makers who could produce moulded bricks of any artistic merit. Hence he had to fall back on his personal skill and ingenuity

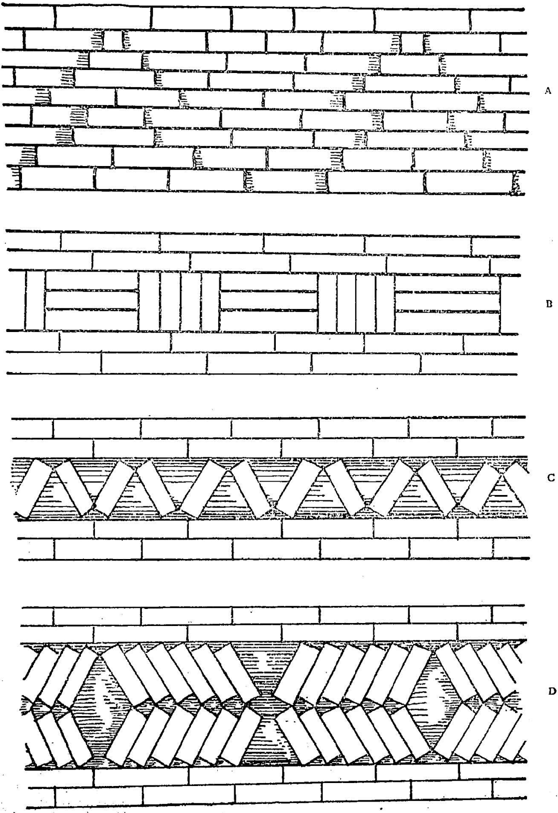


Figure 2

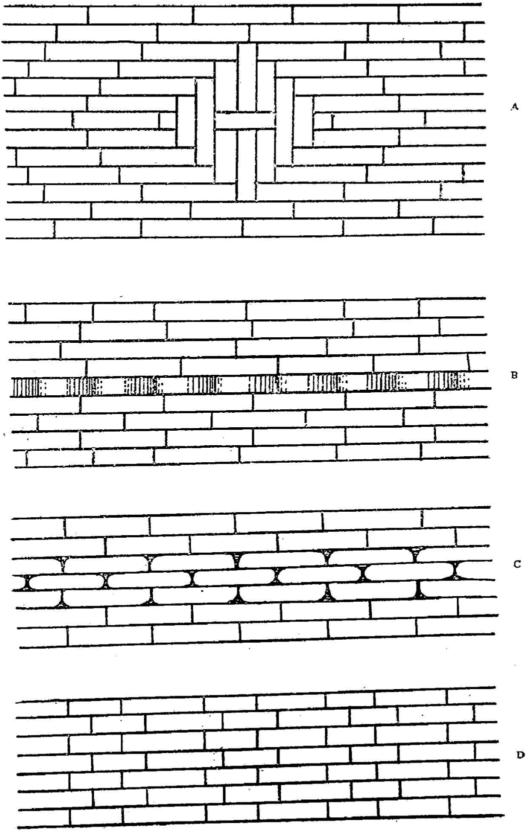


Figure 3

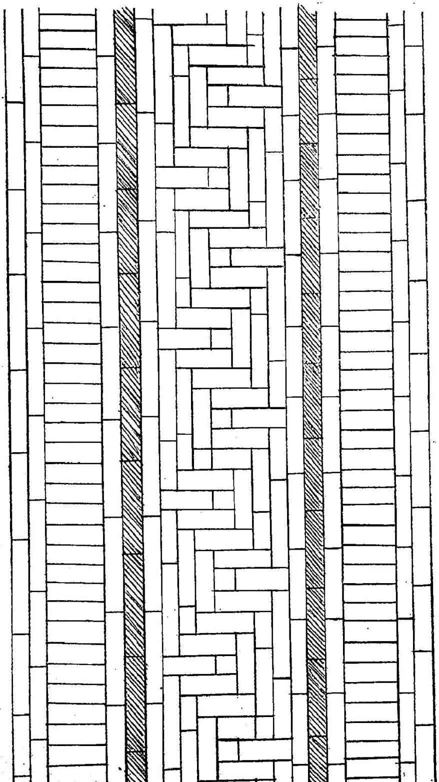


Figure 4

in handling the material that was available to him - brick. These modes he probably invented and practised and are distinct from the better known forms used in the advanced communities. Perhaps they a were part of the heritage of an humble mason, handed down from father to son, in smaller villages and towns. These methods had their own difficulties and problems. To cite, the proper adjustment of the joints and the distribution of weight, especially when the brick-on-edge or splaying-bonds were used. But as would be evident, they fall right in the line of the trade of the mason, and he had very little difficulty in finding solutions for these problems. Nowhere was he required to call upon outside help. What was required was a fairly good knowledge of his trade, a certain amount of ingenuity and an artistic bend of mind.

A widely common practice found at various places like Nevasa, Jalna, Otur, Junnar etc. is decoration in relief, either with the help of moulded or the ordinary brick. Here particular motifs project out from the general suface of the wall, and the ornamentation is confined to only the central portion of the facade which was generally blank but for the opening of the gate. Diaper motifs, parapets and in more advanced places the typical cypress pillar and bud design appear. These are comparatively higher forms, the most elementary being the diaper pattern. At Kalas in the Ahmednagar district the entire facade of a house is girdled with a chain band in relief in addition to the use of over-burnt brick courses. (Figures 1 to 5.)

The next category and the most important from the present author's point of view is that derived from bonding. One factor that is to be borne in mind is, that the walls of these structures were from three to five feet in thickness, as such the outermost course of brick was a mere coat. Apart from the protective role it played it had very little structural function to perform. Hence the bricks could be arranged and manipulated in any manner the mason liked. Here the most elementary device is the use of the Stretching and the Flemish bonds in the construction. Next, in the upper portion of the facade horizontal bands formed out of two rows of brick-on-edge constuction are used. In this, very often the over-burnt brick or *khangar* is used to achieve some colour contrast. Much more successful in serving the same purpose are two types that might be called splaying-brick bond. Here the brick-on-edge instead being laid vertically is given an angle. The bricks are so arranged as to form a zig-zag pattern. The cavities in between the brick are deep and serve to create good shade and light patterns. Generally only one band of this splaying bond was used and that too on the upper surface of the wall. At Ranje in Poona district instead of a single brick meeting another one inclined towards itself, sets of five or six are used in a similar position.

Then, bricks were set for one course in such a manner that one of the angles or the corners of the brick faced outwards. This creates triangular cavities making for a display or light and shade.

Both in the moulded or projecting and in the bonding categories, the schemes are not ambitious. Only the central or the upper portions were used. When however, one comes to the bigger places and slightly later times, the planning is

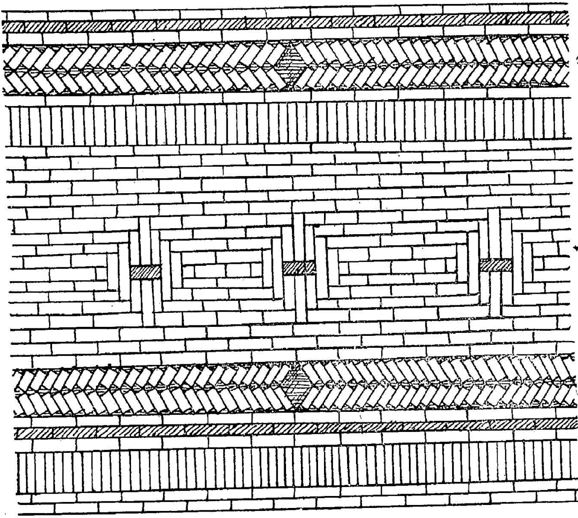
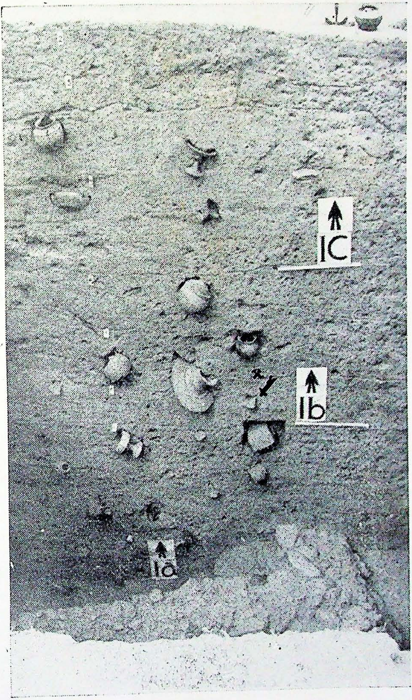


Figure 5

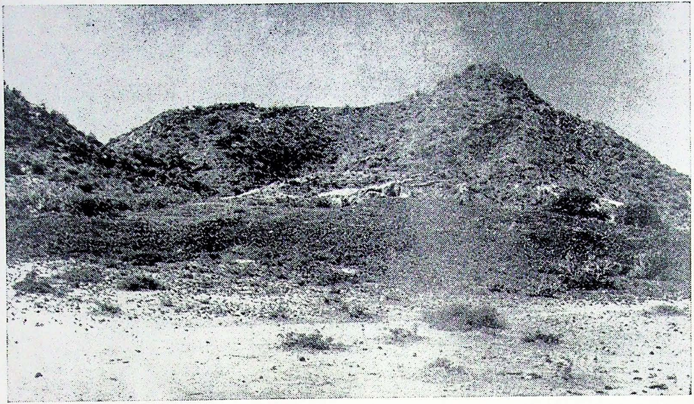
ambitious. The entire wall is treated in this fashion. Some show the employment of all the known methods of bonding used together. Although it exhibits the technical probity of the mason it can hardly be called a pleasing sight. There are still more sophisticated versions where the wall surface is divided into so many panels of various sizes and the space is filled up with geometric designs. These designs again have nothing to do with colour or stucco, but just depend on the outlines of the bricks used. Here very skillful pointing is required and is evident in the two examples reproduced on Plates I and II. (One very significant factor regarding these designs is that they are mostly copies of panels found in wood-work of the late medieval period. And with this invasion by the standardised designs and forms, the spontaniety of the method ends.) For the last half a century or more these methods are now out of fashion.

But their simplicity is appealing and that is why the projecting brick patterns have again appeared at Chandigarh, the masterpiece of ultra-modern architecture.



Vertical section of Ahar Excavation showing various antiquities in their stratigraphical context. Arrow at x points towards copper Axe.

PLATE II



Large Slag heap near Kotri Copper Workings

EARLY MINING AND METALLURGY IN RAJASTHAN, [Part I] COPPER AROUND UDAIPUR

by

G. G. MUJUMBAR

&

S. N. RAJAGURU

INTRODUCTION

A preliminary survey of old copper workings around Udaipur in Rajasthan was undertaken by the authors with a view to throwing some light on the copper mining and smelting industry in early days and to trace the probable source of the raw materials (copper ores) employed for the copper artefacts, found in the excavations at Ahar, a copper-age (chalcolithic) site near Udaipur, carried out by the Deccan College Postgraduate Research Institute, Poona, under the general guidance of Dr. H. D. SANKALIA, in 1961-62 season. (See plate No. 1).

The presence of large number of old copper workings and extensive heaps of slags lying around them indicate that there was a flourishing copper mining and smelting industry in early days at several places such as Khetri, Babâi, (Dist. Jhunjhunu), Kho Dariba (Dist. Alwar), Delwara, Keroli, Debari (Dist. Udaipur) etc. in Rajasthan (see plate No. 2). It appears that most of these mining activities ceased towards the beginning of nineteenth century, chiefly due to the competition from the imported copper metal, increased difficulties in mining and the high cost of smelting smaller quantities of ores by the indigenous methods.

During the present survey the following copper-bearing areas were visited and studied,

1) Delwara, Keroli; North-North-East of Udaipur,
2) Salumber, Dhariawad, Lassadia; South-East of Udaipur,
3) Bansda Bhinder; East of Udaipur.

DELWARA — KEROLI AREA.

These places are situated about 18 to 24 miles NNE of Udaipur on the Ahmedabad-Ajmer highway. The survey revealed the presence of old workings near Delwara, Vilota, Kotri, (all small villages near Delwara), Keroli and Piplia

(Our thanks are due to Dr. H. D. Sankalia for kindly initiating us in this problem and to Shri V. D. Mahajan of the Geological Survey of India, and Shri R. V. Mandare of the Atomic Energy Department, for their keen interest and help during our survey)

(a village near Keroli): About 17 old openings are present near Kotri, Vilota and Delwara area and about 25 old openings near Keroli-Piplia area. The deepest opening near Kotri is about 125 ft. deep (see plate no. 3) These openings might have been interconnected at places. The openings near Kotri and Delwara appear to be very crude and very small in dimensions. Large heaps of slag are lying near Kotri, Delwara and Piplia workings which indicate extensive mining and smelting in the past.

In these slag heaps were also found lying, malachite stained quartz pieces which show that the earlier people have rejected these superficially stained pieces and have almost exploited the whole reserves of good quality cooper ore, leaving very little for the future generations. A Bhairava Temple, near Piplia, might be of interset from the archaeological point of view. (see plate no. 4)

The chief copper bearing minerals extracted from these old pits are Chalcopyrites, a sulphide of copper and iron; and Malachite, a carbonate of copper and both these are associated with quartzites phyllites and biotite actinolite schists. Chalcopyritic specks with little galena are found with quartz veins (near Piplia). Acid intrusions are invariably found to be associated with copper bearing areas. They appear to be the carriers of mineralising solutions. The controlling factors in localising the ore is in most cases, either a fault or shear zone. The older rock formations met within the area are pre-aravali geneisses, quartzites and dolerites of Aravali series and dolomatised limestones, porceleinites, epi-diorites of Raialo series. The general strike of the country rock is NNW-SSE with a dip of 40°-60° towards east. The earlier people appear to have carried out the mining activity by following the out-crops of these minerals and from the hill tops and hill sides. Most of the ore workings are situated in harder geological formations such as quartzites. (see plate no. 5).

Salumbar, Dhariawad, and Lassadia area (about 50 miles SE of Udaipur)

After an extensive survey in this area only one old copper working was found at Velvi (a village near Lassadia). Neither good ore nor any piece of slag could be found near the working. No copper carrying quartz vein could be traced. The controlling factor for mineralisation is a fault zone. The associated rocks are granites (with a foliation strike N27W dipping towards N63E) and chlorite schists (bedding strike being N55E, S55W). In the fault zone proper a thin band of aplite with intensive malachitic staining is noticed.

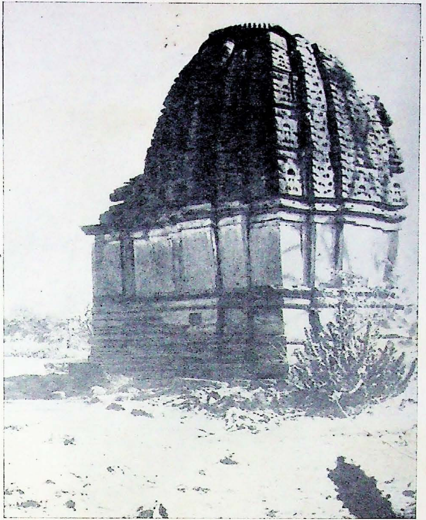
Bansda, Bhinder Area (31 miles from Udaipur on Udaipur-Bhinder road)

A large quantity of scattered copper slag pieces were seen in the open cultivated field with no traces of any old copper working in nearby areas. The land is quite flat and the bed-rock exposed, 2 to 3 ft. below the surface of soil, is granite of pre-Aravali formation.

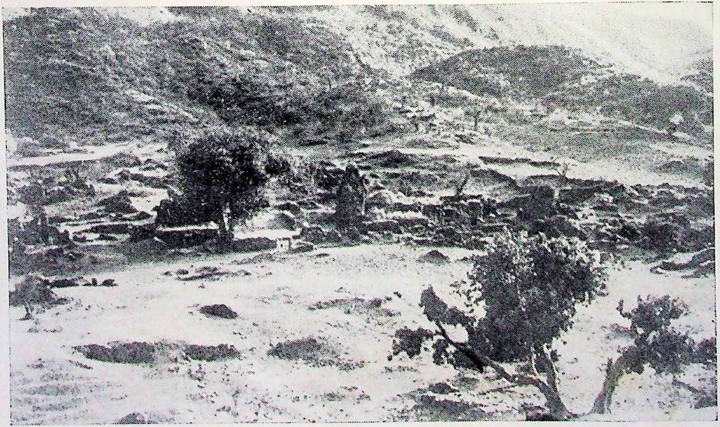
Field study of slags

The slag pieces lying near these workings show variations in dimension, shapes, composition, density etc. From very light frothlike glassy variety to heavy

Old Copper working near Vilota.



a (Front View) Bhairava temple probably of 7th and 8th cent. Pipla b (Back View)



General view of Aravali Hills.

iron-rich, some having malachitic or azuritic stainings, varieties are found. Large cakes of slag with an average diameter of 10-12 inches have been observed. Portions of clay retorts, crucibles and other pots have been collected from these heaps.

To sumarise, the slag pieces could thus be classified as,

1) Heavy and massive type containing more iron and possibly copper and other silicates;
2) Lighter type with less iron and more of silica and other silicates;
3) Glassy froth (similar glassy froth has been found in the Ahar excavations of 1961-62, at a level of 41 ft below datum in pure chalcolithic horizon);
4) Slag pieces fused with either burnt clay or fine sand.

CONCLUSION

The above pieliminary survey revealed that in the area studied, a considerable amount of

a) Mining activity alone (at sites like Velvi, Vilota etc.)

b) Smelting activity alone (at sites like Ahar and Bansda);

c) Both mining and smelting activities at the same site (like Kotri, Piplia and Delwara); have taken place during the earlier days and thus indicate a strong possibility of having utilised the locally available copper ore for the extraction of copper metal for further fabrication into useful shapes and sizes.

Further work is in progress.

PROBABLE USE OF CERTAIN CHALCOLITHIC TERRA-COTTA BEADS

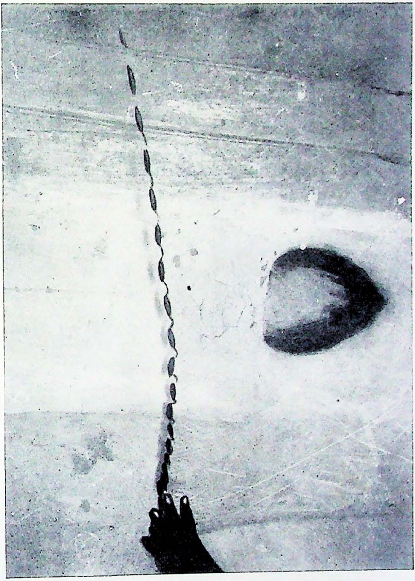
by

S. A. SALI

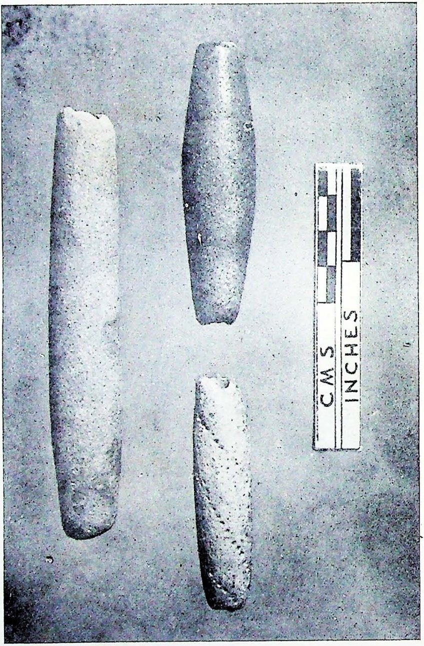
A few terra-cotta beads — long, barrel, circular and long, cylindrical, circular in shape — were recovered in the year 1957 from the Chalcolithic levels during the excavations at Bahal, (Dist. East Khandesh, Maharashtra) on the bank of the river Girna, a tributary of the Tapti and during the surface explorations at Hagari Pada (Taluka Nandurbar, Dist. Dhulia) on the bank of the Tapti itself. As they were devoid of any decorations and polish, and looked rather crude in appearance, their use as objects of ornamentation was doubted. Moreover, it was not known to what practical use they were put by the Chalcolithic folk. Even then by their appearance they were classified as beads, thus indicating their use as objects of ornamentation. In September 1957, the writer, while on exploration in Sakri taluka of Dhulia district came across, by sheer coincidence, a peculiar kind of long net known in the area as *Kandala* (Plate. I) to the lower end of which, were attached horizontally, a series of long, barrel, circular bead-like terra-cotta objects. To his surprise, these terra-cotta bead-like objects were found to be exactly similar, in shape and fabric, to those reported from Bahal and Hagari Pada, but in utter contrast they were found to have been used here as net-sinkers. This aroused the curiosity of the writer and hence more details were obtained from the *Bhois*, who besides other occupations, are chiefly engaged in fishing at Sakri and Pimpalner, both situated on the banks of Panjhra river, a feeder to Tapti.

The Bhois and other fishermen communities like the Bhils call these terra-cotta net-sinkers, '*Mani*', i.e., beads. Their chief function is to keep the net, *Kandala*, under water. The floats measuring from 1 to 2 inches in length are prepared mostly out of branches of *Rui* tree (*Calotropis Procera*) and each one of them is tied exactly opposite the terra-cotta net-sinker, on the upper end of the net, The net is laid across the river or the nullah in about chest deep water and the fish which get caught into the net are picked up by fishermen by diving under and are then collected in bamboo reed baskets.

The terra-cotta net-sinkers are normally prepared in the hot season by the Bhois themselves and not by the potters. The work is generally assigned to the ladies in the family. For preparing these, they use the earth from ant-hills or the fine silt from the river bed, which contains no sand or any other gritty material. The paste is levigated for at least a week. After it is ready, thin dried twigs of



The net 'Kandala' (Copyright. Archaeological Survey of India)



Terracotta Net-sinkers from Sakri and Pimpalner. Dist. Dhulia.
Copyright. Archaeological Survey of India.

any kind of light wood are cut into the length of or a little more than the length of the net-sinkers that are to be made. Around each twig is given a coat of the paste of required thickness and after giving the shape (barrel or cylindrical) and executing incised decorations, if desired, they are kept in a shady place and allowed to dry. Drying takes 2 to 3 days. Then they are fired at a fairly high temperature in dried grass and cowdung cake heaps. During firing the twigs burn down to ashes and the holes remain uniform throughout. The length and thickness of the net-sinkers depend upon the size of the net for which they are to be used.

The writer collected from the Bhois of Sakri and Pimpalner 340 terra-cotta sinkers which can be classified into the following types :—

I. Long, barrel, circular (Plate. II, Nos. 2 &3)

II. Long, cylindrical , circular (Plate. II, No. 1)

Of the latter type, only four specimens are present. Among the examples of the former type are included four specimens with incised dotted lines. (Pl.II,2). The smallest of all is 1 inch long while the biggest is 2 inches in length. In type II the smallest is 1¼ inches in length and the biggest 2¼ inches. Except seven, all are used and most of them are together with the fragments of the used nets to which they were attached. The specimens of type I show glossy surfaces as if polished, or burnished. This glossy appearance is given to the surface by rolling the net-sinkers in castor oil.

It has already been pointed out that these terra-cotta net-sinkers have close affinities in shape and fabric with the terra-cotta beads recovered from the Chalcolithic levels of Bahal and a surface find from the Chalcolithic site at Hagari Pada. Similar types of beads have also been unearthed at Harappa.[1] While commenting upon the long, barrel, cylinderical beads from Mohenjo-daro, the late Sir JOHN MARSHALL says, 'the beads made of pottery have no slip and their holes were probably made by moulding the bead upon a piece of fibre which was burnt away when the bead was baked. Indeed, their irregularity suggests their having been moulded by fingers.[2] That fishing was in vogue among the Chalcolithic folk has been amply demonstrated by the fish motif painted on their pottery, and the copper fish-hooks recovered from the excavations of the Chalcolithic sites of Central India and the Deccan. Except the basket-like nets painted on a potsherd from Harappa[3] no other types of nets are so far known. However, the striking similarity between the so-called terra-cotta beads from the Chalcolithic sites mentioned above and the modern net-sinkers discussed here leads one to think that the former might have been used by the Chalcolithic people for fishing purposes and hardly for ornamentation, thus confirming the existence of fishing in the proto-historic Maharashtra and the remarkable survival of a Chalcolithic tradition through the ages.

1 WHEELER, R.E. M., 'Harappa 1946; the defence and cemetery R. 37, *Ancient India, No.* 3, figs. 26, 31, 33-37.

2 MARSHALL, SIR JOHN, *Mohenjodaro and the Indus Civilization*, Vol. II, p. 512.

3 *Annual Report of the Archaeological Survey of India*, 1930-34, Part II, Pl. XXVII b, 12395.

CULTURAL ETHNOGRAPHY FROM VASUDEVAHINDI

by

A. P. JAMKHEDKAR

Jains are supposed to be the best story tellers as is evident from the immense bulk of such a literature handed down to us. In these stories and romances, a very interesting information about the social life has been skillfully mixed up with the fabric of the narratives and Vasudevahiṇḍi is no exception to this.

An exhaustive study of all the aspects of life is a lengthy task. However, as a part of this study, it was thought fit to study first the personal names occuring in Vasudevahiṇḍi.

Similar studies based on epigraphs for knowing the cultural ethnography have yielded interesting results so far as the records from the Gujarat,[1] Deccan,[2] and Madhya Pradesh[3] are concerned. In the following pages, an attempt is made to apply this method , for the first time, to a literary work. Vasudevahiṇḍi, supposed to belong to the Gupta period, which is taken to be the golden age in Indian history, throws interesting sidelights on the contemporary cultural enthography.

The data for the study of cultural ethnography in Vasudevahiṇḍi is different from the normal one in the sense that in this work, side by side with the human world, one gets acquainted with a wonderland in the mysterious mountains of the Himalayas. This is the land of the Vidyādharas. These Vidyādharas, as their name suggests, wield some supernatural powers because of their Vidyās, which make them superior to human beings.

Naming a child was an important event in ancient times. Among the sixteen Saṁskāras', the 'Nāmakaraṇa' was a separate 'Saṁskāra'. In the Gṛhyasūtras, we come across various rules regarding the naming of child. Manu[4] takes into consideration two aspects of name. The first is, the formal aspect of the name of a person under which, Manu gives various suffixes, which should be added after the names of the four castes. The other aspect is, that of the meaning suggested by the name. He says, for example, that the name of a 'Brāhmaṇa' should suggest auspiciousness[4]. But here, we do not get any idea about the factors which were responsible for the determination of a name.

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1 SANKALIA, H. D., *Historical and Cultural Geography and Ethnography of Gujatat.*

2 MULAY, S., *Historical and Cultural Geography and Ethnography of the Deccan.* Ph. D. Thesis submitted to the University of Poona.

3 GOKHALE, S., *Historical and Cultural Geography and Ethnography of Madhya Pradesh. Ph. D.* Thesis submitted to the University of Poona.

4 MANUSMṚTI, Chapter II, 32.

In this connection, the 'Anuyogadvārasūtra' a Jaina canonical work provides interesting information. While discussing the 'Ṭhavaṇā nāma' (Sthāpana Nāma), the author states that there are seven factors (Pamāṇa: Skt. Pramāṇa) which determine the name. They are as follows :—Nakṣatra, Devatā, Kula, Pāsaṇḍa, Gaṇa, Jīvikāhetu and Abhiprāya.[5] In some other context, the sūtra states that 'Kṣetrasaṁyoga, and the names of the ancestors also determine the name of a person.[6]

In the light of this information and the various references in Vasudevahiṇḍi itself, the personal names in this text can be classified as follows :—Names after: Nakṣatras, devatās, ancestors, 'longing of the mother', (Ḍohala : Skt. Dohada), 'dream seen by the mother' (Suviṇa : Skt. Svapna), Kṣetrasaṁyoga, Nairukta and Jīvikāhetu.

NAKṢATRA GROUP : The name of a Nakṣatra formed part of a personal name, if that particular person was born on that nakṣatra. An indirect reference is made to such a practice while naming prince Jamadaggi (Jamadagni)[7]. Following is the list of such nakṣatras, after whom the names are formed : Katta (Kṛttikā), Citta (Citrā), Phaggu (Phalgunī), Bhadda (Bhādrapada), Maha or Magha (Maghā), Miga or Miya (Mṛgaśiras), Mūla, Revaī or Revaya (Revatī), and Rohiṇī. This practice seems to have been in vogue in all castes and classes. Thus for example, Kattavīriya is a king, Cittavīriya, a vidyādhara king, Cittasena a cook, Miga, a brāhmaṇa, and Revaï, a merchant. Among the females, Cittamālā is a queen, Cittavegā, a vidyādhara princess, Cittasenā, a courtesan, and Revaī, a brāhmaṇī.

If not after the nakṣatras themselves, many a time the names were formed after the presiding deities of the nakṣatras. The name of prince,' Jamadaggī' is interesting from this point of view. A son was born to Saṁghamatī, queen of Aggisehara. Two astronomers were in a conflict as to what was the nakṣatra on which the prince was born. One held that at the time of the birth Bharaṇī was setting, while the other opined that it was the rising time of kṛttikā. So a solution was, at last found out that the name of the prince should consist of the names of the presiding deities of both the nakṣatras. So he was named 'Jamadaggī' (Jamadagni), the presiding deities being Jama, i.e., Yama and Aggi, i.e., Agni of Bharaṇī and Kṛttikā respectively[8].

In this class again, alike the previous type, names are to be found from all the classes of the society. Thus we have Sūrya and its synonyms, such as Akka, Āïcca, Divāyara, Pabhakāra; Aggi with its synonyms, Vaïsāṇara, Jalana, Aṇala, Ajjava (Aryaman), Amayaguru and Bahassaï; Āsa (Aśvinī), Inda with its synonyms Vajjāpaṇi, Vajjāüha, Mahinda, Surinda, Vāsava and Puruhūya; Soma; Jama; Nāga; Payāvaï; Vāü and Pavaṇa; Pūsa; Baṁbha; Vasu; Mitta; Rudda; Varuṇa; Viṇhu; and Visa.

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5 ANUYOGADVĀRASŪTRA, Vijayakamala Surisvaraji Jaina Granthamala, No. 1, 1939, pp. 133-34.

6 *Ibid*, pp. 130 & 137.

7 *Vasudevahiṇḍi* (Vh) ed. Punyavijayaji and Chaturavijayaji (1930), pp. 235.

8 *Ibid.*

Some of the examples of this category are as follows:— Divāyaradeva is a King; Aggilā a brāhmaṇi; Ajjava, a Raṭṭhaüda; Bahassaïsamma is a foreteller; Pūsadeva, a merchant; and Baṁbhi a princess.

DEVATA GROUP : Apart from the nakṣatra devatās, the other deities also influenced in giving the personal names. The male deities are as follows; Kāmadeva, Kubera, Khanda, Gomuha Jayanta, Dhannantari, Maccha, Kaccha, Maru (Marut), Mahesara, Varāha, Surūva, and Maṇibhadda.

The female deities are as follows :— Alaṁbusā, Ilādevī, Gaurī, Jasoharā, Dhaṇasirī, Nandā, Pundaraginī, Puhavī, Bhogamālinī, Mehamālinī, Raï, Lacchī, Vijayā, Vejayantī, Sirī, Sīyā and Hirī.

Kāmadevaseṭṭhī; Kāmummatta a Vidyādhara prince; Kuberadatta, son of a courtesan; Maccha, a king; Marudeva, a brāhmana; Surūva, son of a thief; Dhaṇasirī, a princess; and Mehamāliṇī a Vidyādhara queen are some of the examples illustrative of this group.

In the case of such names, it may be observed, that the names after Kāma, Kubera and Sirī were more in vogue.

The names after the Tīrthaṁkaras are included in this group only. Thus for example; Ajiya, Ananta, Amiya, Jīvasamī, Vimala. Saṁti, Sayaṁpabhā, Ariṭṭhaṇemi, Usabha, Ghanaraha, Daḍhadhamma, Dhamma, Nami, Nemi, Sayaṁbuddha and Sīlaya. The first seven names form part of the personal names of women also. Ajitasena is a common name for a king, a vidyādhara prince and a thief. Daḍhadhamma is son of a merchant (Ibbha). Vimalābhā is the name of a princess as well as that of a vidyādhara queen.

The list of persons bearing the Tīrthṁkara names shows that they come exclusively from the royal families and the merchant class, the only exception being that of one royal priest whose name is Santi[9].

Side by side this particular type there are names such as Arahadāsa, Jiṇadāsa, Jiaṇdatta, Jiṇadāsī and Jiṇapāliya. Araha and Jiṇa are the words which are specifically used as epithets for the Jaina tīrthaṁkaras. They form part of the names from the merchant i.e., the Vaiśya Class only. Even to this day, the main bulk of the followers of this religion is formed by this class only.

KULA GROUP : In this group are included the names Agatthi, Aṁgirasa, Goyama, Kāsava, Kosiya, Bhigu, Saṁḍilī, Saṁḍillāyaṇa, Andhagoyama and Ikkhāgacandakittī. Except the last one, all the others belong to the Brāhmaṇa class. They are Ṛiṣis, Tāpasas, Purohitas, Ministers, Upādhyāyas and foretellers. It may be mentioned here that even from the times of the Jātakas, the brāhmaṇas in addition to their pristly activities, had channellised their activities in other fields also[10]. Ikkhāgacandakitti (Ikṣvākuchandrakīrtti) is evidently from a Kshatriya family.

9 The name Santi might be associated with Śāntikarma, one of the magical rites from Atharvavėda.
10 MEHTA, R. N., *Pre-Buddhist India* (1939), pp. 248-250.

GAṆA GROUP : The examples of this group are very few. They are Goripuṁḍa, a vidyādhara; Pallavaka, a servant; Babbarī and Cilāyïgā, dancers; Bhoyavaṇṇī and Andhakavaṇṇī, kings. Goripuṁḍa vidyādhara is probably from the Gorikānikāya. Pallavaka might be from the pahlavas. Babbarī from Barbaricum. Kirātikās are famous in the Mahabharata also. Dharmarāja, in the Rājasūya sacrifice, is presented with hundreds of Kirātadāsis[11].

ANCESTOR GROUP : In this group, we can clearly have three divisions, viz., names after father, names after grandfather and remote ancestors and names after mother.

The sons of Nala and Āsaggīva are referred to as Nalaputa and Āsaggīvasuä respectively. Jaṇayataṇayā is the name of Sītā, after her father Janaka. The other two examples of Nābheya and Vāsudeva are Taddhita forms of Nābhi and Vāsudeva.

Another interesting practice can be observed in the following names : Nīla is a son of Nīladhara, a vidyādhara king; Vaïraṇābha, son of king Vaïrasena; Gaṁgarakhiya is the son of Gaṁgapāliya, a doorkeeper of the King; Dhaṇasirī is the daughter of Dhaṇa sārthavāha. In these names, the core of the name has been retained and the only difference is that of the suffix. But in the case of Princesses, Kavilā Jaṁbavatī, Devaï and Puṁḍa only the feminine forms of the names of their fathers are used as their names. Sometimes, as in the case of Samuddadatta, son of Sāgaracanṁda, Mandar and sumeru, sons of King Merumālī, the names are the synonyms of the names of their fathers.

Certain names of the remote acestors with whom some sort of legend was attached were always favoured. One Brāhmana Nārada was donated a village Giritaḍa by king Divāyaradeva. Again a Nārada appears in the list of his descendants. One śreṣthin Kāmadeva of Sravastī, was associated with 'Migaddhayacariya,' and one of his descendants, again is a Kāmdeva.

Usabhasāmi's grandson was named after him and his name was Usabhasena. It was believed that a *dauhitra*, is as good as a son. This belief is reflected in the names of the Princes Māhapuṁda and Kavila, grandsons of Puṁda and Kavila.

The practice of naming a person after his ancestor is further corroborated in the text in an interesting story. Certain twins, after their nāmakaraṇa, were deserted by their mother, a courtesan, in Yamunā. The baskets were caught in, Soriyapura by two merchants. Accidentally enough, when they grew up they were married to each other. While playing dice with the bridegroom, the bride took out his ring bearing his name (nāmamudrā). From the similarity in the manufaeture, of the rings, and in the names, she suspected something. The suspicion was futher strengthened as she found out that there is no ancestor in both families of the same name. On enquiry, her suspicion came to be true and they got separated[12].

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11 *Mbh.* (Critical Edition), Sabha. 48. 10.

12 *Vh.*, pp. 10-11.

On the lines of the names Asaggīyasuya and Nalaputta there are names Rohiṇīsuya, Jasavatīsuya, Vīrasena and Eṇīsuya or Eṇiyaputta. The difference in these two types, i.e. the patronymics and the matronymics, with the suffixes Putta and Suya is that the former are more or less descriptive while the latter are formed with a view to differentiate the particular person from his step-brothers. Thus, for example, in the case of Jasavatīsuya Vīrasena, his father's name was Vīrabāhu who had two other sons of similar names, Viarajjhaya and Vīradatta from his other queen Sumaṇā.

In the lithic records of the Sātavāhanas, the kings are referred to in a a similar way. Pulumāvi was Vāsishṭhīputra and another example is that of Gautamīputra Sātakarṇi. But in the case of Eṇīsuya, the prince was so named, because his dead mother fed him in the form of a deer (Eṇī). This practice of naming after the mother does not seem to have been restricted only to the princely class as shown by the names Aīkaṭṭha, son of Kaṭṭhā, wife of a Butcher, and Kavila son of a dāsī, Kavaligā.

Another sub-group consisting of the names formed by both the names of the parents. Dhaṇavasū was the son of Vasumitta and Dhaṇasirī. Prince Rayaṇāüha was the son of Rayaṇamālā and Vajjāüha. Vijjudāḍha's parents weer Vijjujjibbhā and Vaïradāḍha. Therefore, it seems this practice was current in all classes and castes.

This and the other practices described above naturally resulted in the similarity in the names of brothers, or brothers and sisters. Kuberadātta and Kuberadatta of the story told above were twins born to Gaṇika Kuberasenā. Bhavadatta and Bhavadeva are brothers from a Ratthaüda family. Jiṇadāsa, Jiṇagutta, Jiṇadatta, Jiṇadeva and Jiṇapāliya are the sons of a trader. Vīrajjhaya and Vīradatta are brothers. Thieves Bhaggapuḍa and Vibhaggapuda are brothers. Vijjumatī and Vijjulayā are sisters. Somasamma and Somasammā are children of a brāhmaṇa.

Dohala group : Pregnancy desire of the mother was also sometimes responsible in naming a child. Dhammilla, a trader's son and Sāgaradatta, a prince are the illustrations. Dhammilla's mother had a desire to practice Dhamma,[13] i.e., to distribute money among the poor by way of charity. So the son was named Dhammilla. Sāgaradatta's mother, the queen, had a desire to bathe in the sea, hence the name Sāgaradatta[14].

Dream group : Sometimes persons were named after the objects seen in dreams by the mother. Jaṁbu, son of a Sārthavāha, was named after the Jaṁbu fruits seen by his mother in dream[15]. Similar is the case of Ṛṣabha[16], Kuṁthu[17], Ara[18] who are all tīrthaṁkaras.

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13 *Vh.*, p. 27.
14 *Vh.*, p. 23.
15 *Vh.*, pp. 2-3.
16 *Vh.*, p. 161.
17 p. 344.
18 *Vh.*, p. 152.

KSHETRA SAMYOGA : In this group are included names of persons named after the provinces or cities because of their association with them. Komkaṇaya was a Brāhmaṇa living in Magadha, who might have migrated from Komkaṇa. A king is called Pukkhalāvati gaṁdhāra to differentiate him from other gandhāra kings. Cedipayi is the king of Cedi. In the names of females, except that of kaliṁgasenā, all the other names of the princesses are formed after the kingdoms, from which they hailed, Gandhārī and Kekkaī being the wellknown examples.[19]

NAIRUKTIKA GROUP : In this group are included names of which the etymology has been given in the text. King Dakkha Payāvaï is so named as he enjoyed his progeny[20]. One brāhmaṇa Goyama is called Nissiriya because he was born pennyless[21]. The latter names were like nick-names acquired later, in addition to their original names. While some other names were associated with the original names, after some incidents at the time of their birth. Pippalāda, the brāhmaṇa was named so, because he ate pippala leaves after his birth.[22] Cārudatta got that name, since his birth was the result of the boon of Cāru muni.[23].

In all these names, the name Jara is interesting. This was given to the child with the intention that the prince may weaken (Jara) his enemies. The Atharvanic tinge in this name is very clear. Etymologically also, this is perhaps the best example[24].

JĪVIKĀHETU GROUP : There was a practice whereby the newly born child was sometimes abandoned in a public place and then was taken back as a member of the family if many premature deaths had occured in the family. The name Dharaṇījaḍha of a brāhmaṇa, suggests the same practice of abandoning the child to the earth.,

MISCELLANEOUS GROUP : In this group are included names which cannot be included in any of the previous groups. But here also some broad categories can be perceived.

Many a king has been named Amittadamaṇa, (one who controls his enemy), Ariṁjaya, Ariṁda, Ariṁdama, Arisiha, Jiyasattu, Sattuggha and Hayasattu. In fact, Arisiṁha has been described as a king who is like a lion to his enemies[25]. That this category was very general can be surmised easily as Amittadamaṇa, Rivudamaṇa and other names could be used as synonyms. This group of names can easily be explained as appellations by the kings to show their valour.

Apart from the name Dhaṇada, which is one of the names of Kubera, there is a good number of names, formed by adding various suffixes such as -datta,-deva, -dhana (money), to denote prosperity. The examples of this category are : Daṇa,

19 *Vh.*, pp. 78-79 and 241.
20 *Vh.*, p. 276.
21 *Vh.*, p. 113.
22 *Vh.*, p. 152.
23 *Vh.*, p. 133.
24 *Vh.*, p. 360.
25 *Vh.*, p. 257.

a name both of a Sārthavāha and a prince; Dhaṇavaya, a king; and Dhaṇasirī, a name of a princess and a Sārthavāhi. All these names, except that of a thief Dhaṇa-puṁjanta, belong either to the trader's-class or to the royal family.

To show the prosperity, names were also given after the precious metals and the diamonds, such as Kaṇaga, Ruppa, Hiraṇṇa, Vaïra, Maṇi, and Rayaṇā. Except the name Hiraṇṇalomā, a brāhmaṇī, all the names, such as Ruppiṇābha, Kaṇagamālā, belong to the trader and royal classes.

Sometimes the flowers (Puppha) and the various synonyms for lotus, such as Uppala, Paüma, Kamala and Kumuya form part of personal names, usually of women. One remarkable feature of this type of names is that not a single example is to be found from the brāhmaṇa class. Occasionally, such names are given to males also, example being that of Paümāaṇha who is a prince.

There is another group of names from Vidyādharas and royal families having Megha and Meha as a core of the name. Mehaseṇa and Mehāmailṇī are the examples. The association of Megha is significant in the light of the fact that the vidyādharas are ethereal beings.

Numbers also formed part of the personal names. Thus Ekasiṁga is a Tāpasa; Dasaraha, a king; and Saiggiva, a vidyādhara king. As many of the examples are from the vidyādhara stock, this type of names were probably more in vogue among the vidyādharas.

The mountains of Bhāratavarṣa have some sanctity attached to them. This is evidenced in the names of the kings Himavānta, Mandara and Nīla. This has been reiterated by their occurrence in the names of Cāraṇa śramaṇas. Sometimes in the case of the kings, it indicated the dominion where the king ruled, as in the case of King Viṁjharāya who ruled in the Vindhyan region.

SUFFIXES : So far, a general survey of the names was taken. In this more attention was paid to the meaning of its core. Now let us examine the various suffixes which are added to the them.

The latter half of the name though technically can be called a suffix, cannot be taken as such. For, it has been observed, that the core of the names also sometimes occurs as the latter half of the name[26]. At the same time the suffix also has the full status of a name as in the case of *Datta*, while it should be principally regarded as a suffix only. Hence, while determining the suffix, we have to rely more on convention than on a technical definition of a suffix.

It has been observed in the ancestral group of names that the names of the father and the mother or of both, and those of the ancestors continue in the names of their progeny, either partially or *in toto*. Not less than two scores of examples have been found where alike the name, suffixes were continued in the family. And this phenomenon is not restricted to any specific class or caste. That this system was in vogue is indicated by its occurrence continuously in four or five generations

26 Asaṇi of Asaṇighosa occurs in Indasaṇi as the latter part of the name.

of a family. For example, — ggīva in Rāvaṇa family, and -giri and — bāhu in Harivaṁśa.

Suffixes were also shared by brothers and sisters in common, examples being, Vaïraṇābha, Kanakanābha and Ruppaṇābha who were all brothers. This common feature was partly due to the parents. This has been shown in the case of sons of Asaṇighosa, named Sayaghosa, Sahassaghosa, Bhīmaghosa and Mahāghosa. Piyadaṁsaṇā and Sudaṁsaṇa were the daughters of a Sārthavāha.

Naturally, many suffixes are common to the names of male and female. Of course, while adopting the male suffix to that of a female, proper grammatical changes were effected. For Example, Aṇaṁda and Ābha were changed into Āṇaṁdā and Ābhā, while some like Kitti and Gati were common to both.

Here an attempt has been made to study the various suffixes occurring in the personal names. This study shows that the suffixes in general can be classified as follows :

1. Valour, 2. Personal attributes, 3. Parts of body, 4. Ornaments, 5. Prosperity, 6. Nature and auspiciousness and 8. Miscellaneous.

1. Valour : Under this, the suffixes represent power, vāhana, banner and weapon.

Suffixes indicative of power, Māra, Sattu, Bala, Bali, Vikkama, Vīriya, Ppahārī and rivū are used in the names of the kings. In the names like Sattudama and Ariṁdama 'controlling of the enemy' is indicated, while in the name Dhuṁdhumāra the enemy has been specified. The suffix Rodha shows the repelling spirit of the warrior, while Bhaya with Jiya or 'A' shows courage. Sayabala, Garulavikkama, Aṇaiṁtavīriya and Amohapphāri are the examples showing valour.

The idea of army has been suggested by the suffix 'Seṇa'. Naturally one expects that Seṇa is associated with the names of the kings or the warriors. And this suffix suits well with names such as Uggaseṇa, having a ferocious army, Ajiyaseṇa, one whose army cannot be conquered, or Rahasena, one whose army consists mainly of chariots and Āsaseṇa, "having mainly cavalry in the army". But after hyper use of this suffix it naturally lost its original signficance, in the names such as Iṁdusena, Raviseṇa which were the names of princes and became more or less a suffix showing dignity of the royal or warrior class. Its feminine form seṇā also seems to have been used in the names of ladies from royal families. Piyasenā, Iṁdusenā and Puhaviseṇā are the examples. But this process of dilution of the suffix, as we may call it, did not stop here. This suffix was used in the names such as Kuberaseṇa, who was a Sārthavāha, and Naṁdisena, who was a brahmana. Further in the case of females also like Aṁjaṇaseṇā, a brahmaṇī, Paümaseṇā, a sārthavāhī and Vasaṁtasenā, a courtesan, this suffix was used.

Suffixes connected with the Vāhanas and Rathas are to be found mainly in the names of kings and Vidyādhara kings. The examples are Daḍharaha, a king Ekaraha, a vidyādhara king and Amoharaha, charioteer. In the name Maṇoraha, suffix 'raha' is not exactly a suffix and, therefore, an exception. Name Vimala-

vāhana was given to the Kulakara as he used to ride a white elephant. Name Harivahāna posibly means a horse-rider. Mehavāhana is a vidyādhara king.

Suffixes connected with the banner, 'Ddhaya or Jjhay', (Skt. Dhvaja), 'Ketu,' and 'Padāgā' (Patākā), are to be found in the names Migaddhaya, (Mṛgadhvaja), Garulaketu, the name of a vidyādhara king and Kāmapādāgā (Kamapatākā), a dancer. The names with the suffixes connoting the banner in the case of the kings can easily be explained in the light of the convention that the newly consecrated king had the right to choose his own banner. The name Raṁgapādāgā of a dancer suggests that she had a place of honour on the stage.

Suffixes connected with weapons are to be found in the names such as Cakkāyuha (Cakrāyudha), Silāyuha (Silāyudha), and Ayadhanā (Ayadhanus), one having an iron bow, in the names of the vidyādhara kings and royal families.

Suffix 'Siha', meaning lion, indirectly conveys the idea of valour. This has been once used in the name of a king 'Balasīha' and for the rest of the times, in the names of the Vidyādhara kings, 'Balasīha', Arisīha, Narasīha, and Dhumasīha. In the text, the king Arisiha has been described as a king who is a lion in defeating enemies.

2. Personal Attributes : There is a group of suffixes indicative of the personal qualities and attributes of a person. They are : Ga, Gaya, Vega, Java, Rai, Kaṁti, Kitti, Jasa, Ruva Daṁsaṇa, Ghosa and Nāya.

The idea of alertness has been indicated in the suffixes such as Gati, Ga, Gaya, Vega, Java, Raī. These are restricted to the names of royal families and especially, those of the vidyādharas. Suffix Gati is used both in the names of males and females, without any change. Amiyagati is the name of a queen and Garulavega that of a king. Because of the large and varied use of the suffix Vega and its synonyms such as Java, it can be very well surmised that the royal families borrowed these names from the Vidyādharas. Again these names very well suit the vidyādharas who are attributed with the lore of flying in the air.,

Attributes showing lustre such as Pabhā, Pabha, Ābha, Ābhā and Teya (Tejas) are found in names such as Candabha, name of both a vidyadhara and a king, vimalābhā name of vidyādhara queen and a royal queen. Curiously enough these suffixes are generally connected with Divākara (sun) or its synonyms and Caṁda (Moon). This suits well with a reference in *Vasudevahindi* where king Seniya has been described as having the lustre of the sun and the moon.[27]

Suffixes denoting glory are Kitti, Jasa and Jasā. Kitti is common both to the names of males and females. Akkakitti is a vidyādhara king and Candakitti is the name of a king and also a princess. As regards the suffix Jasa, along with the name of kings, there is one Sujasa who is a charioteer. Suffix Jasa is to be found in the name Caṁdajasā, a brāhmaṇī and Amiyajasā, a courtesan. Kitti and Jasa connected with the sun and the moon probably show the fame of the king being like that of the sun and the moon.

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27 *Vh.*, p. 2.

Suffixes connected with physical beauty are Rūva, Rūvā, Daṁsaṇā, and Suṁdarī. Surūvā, Suruva, Sudaṁsaṇā, Piyadaṁsana, Logasuṃdarī, Piyaṁgu-suṁdarī are the names formed with these suffixes. Suruva, the name of a thief might be after the name of a Yaksa. Sudaṁsaṇā and Piyadaṁsaṇā are daughters of a trader. One courtesan is also named Sudaṁsaṇā. Such a name was no doubt in the latter's case an advertisement only. Logasuṁdarī, a vidyādhara princess was so named probably to signify that she was the most beautiful maiden in the whole world while the other princess from Śrāvastī was beautiful like the new sprout of Piyaṁgu tree.

Suffixes signifying voice are ghosa and nāda. They are Abhayaghosa, the name of a trader and Asanighosa, the name of a vidyādhara king. To have a good voice (Sughosa); or a dreadful voice (Bhīmaghosa) : or the voice like the thundering of the cloud (Meghanāda) did count something among the vidyādharas. These suffixes originally seem to have been in their names.

3. Parts of the body : A number of suffixes like Cūla, Loma, Kaṁtha, Ggiva, Vakka, Muha, Daṁta, Ḍāḍha, Nāsa, Bāhu, Pāṇī, Naha, Jaṁgha, Pāda denoting various parts of the body have been used in the personal names. These are important as they provide us clues to know the racial features of the persons concerned along with their objective of showing the strength and beauty of their limbs.

Suffixes after the tuft of hair are Cūla and Kesa. They are used in the names Dittacūlā, a vidyādhara prince, Pupphacūlā, and Suvaṇṇacūlā, names of princesses and Mīnakesa, a vidyādhari princess. The names, Pupphacūlā and Suvaṇṇacūlā reveal the custom of wearing flowers and gold ornaments in the tuft of hair, while Mīnakesa might indicate some ornament like fish worn in the hair. One of the sculptures from Mathura is adorned with such an ornament. It is dated to the Kushana period c. 2nd century A.D[28]. Suffixes Jadī and Maṁsu signify beard. Jalanajadī and Hariaṁsu are examples of this type belonging to them vidyādharas. These names mean a person having a yellow beard. This type of beard can only be imagined in the case of the people living in the Himalayan region.

Suffix after hair is loman. In the case of a vidyādhara a Tāpasa, or a brāhmaṇī are said to have yellow hair (Hiraṇṇaloma) while some other brāhmaṇī have dark hair (Samalomā).

Suffixes signifying neck are used in the names of the vidyādharas, viz., Maṇikaṁṭha, Nīlakaṁṭha. The association of Maṁi compels us to interpret Nīla as the name of a diamond also. The meaning suggested would be 'one who wears a blue jewel in the necklace'. The name Maüraggīva can be interpreted in the same way as we know that Nīlakaṁṭha is a synonym of Maüra (Peacock). Can Mahuraggīva mean one who has a good voice ? If so, it corresponds with the quality of the vidyādharas as musicians. Suggīva and Jasaggīva are the names of two musicians in Campā. The name Dasaggīva and the names of his forefathers such as Vīsaïg-

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28 Vogel, J. Ph., *La Sculpture de Mathura* (1930), pl. L.

gīva Paṁcāsaggīva and Sahassaggīva etc., cannot be interpreted satisfactorily.. According to the traditions of the Pūrāṇas, Dasaggīva's (Rāvaṇa's) father is Pulastya. The only plausible explanation at this stage is that Rāvaṇa is also attributed with the tenfold division of Ṛgveda.

Suffixes signifying face and mouth, i.e., Vakka and Muha are used in the names. King Daṁtavakka (Dantavaktra) is also famous in the Purāṇas. Suffix Muha is illustrated in the name Kālamuha, (Jaw of Death) which is the name of a king. Dahimuha, the name of a vidyādhara, is very difficult to explain. Gomuha Sārthavāha is named after the Yaksha of the same name. A servant has been named as having a bad mouth or face i. e., Dummuha (Durmukha). One spy of this name was in the service of Rama, as is known from *Uttara-Ramacarita*.

Suffix signifying tooth, Daṁta, is also found in personal names. The teeth are generally, compared with the buds of flowers. Probably the same idea is behind the names of king Pupphadaṁta and queen Pupphadaṁtā. Poet Puṣpadaṁta, author of Mahāpurāṇa is famous in Jaina literature.

Suffix signifying Jaw, Daḍha, singularly used in the names of the vidyādharas. Sīhadāḍha and Vairadāḍha are suggestive of strong jaw.

Suffix indicative of nose, nāsā, has been qualified in the name of a vidyādharī, Kumbhīnāsā. To have a nose like an earthen pot looks very queer. The same is the case with suffix kaṇṇa. Kumbhīnasā's stepbrother is named kumbhakaṇṇa. The suffix puḍa in names Bhuggapuḍa and Vibhuggapuḍa shows the snubbed noses of the Pulindas from whom these thieves come.

The suffix indicative of tongue, Jibbha, is only to be found in vidyādhara names such as Vijjujjibbha and Vijjajibbhā.

Suffix signifying arm, Bāhu, is more to be found in the kṣatriya names. The arms are indicative of valour. Symbolically a kṣatriya is the arms of the society. To have long arms (Dīhabāhu) was supposed to be one of the indications of a mahāpuruṣa. One vidyādhara prince has been named Vīrabāhu.

Suffix signifying hand, Pāṇī, has been qualified by Vajja. Vidyādhara king who weilds a vajja is Vajjapāṇī.

One of the sisters of Rāvaṇa has been named Suppaṇahī, having nails as big as a husking tray. The names, Kumbhakaṇṇa, Suppanahī and Kumbhināsā are all probably suggestive of the racial features of the vidyādharas, some of whom were probably non-Aryan.

Suffix signifying navāl, Naha, has been used only in the names of the kings. Paümaṇāha, having lotus on the naval is one of the names of Viṣṇu. The navel is associated with birth. Kaṇakaṇāha or Ruppaṇāha suggest the high birth of the kings.

Suffixes signifying legs Pāda and Jaṁgha, are used in the names like Vairajaṁgha, Kākajaṁgha and Missayapāda. Vairajaṁgha has been explained as one who has powerful legs. Kakajaṁgha and Missayapāda are probably synonyms

of Vaïrajaṁgha. To have strong legs was essential for a messenger in the olden times. Missayapāda is messenger.

4. ORNAMENTS : There is a group of suffixes which signifies ornaments such as crest, ear-rings, armlets and belt. They are: Sehara, Kūta, tilaya, tilayā, Kuṇḍala, aṁgada and dāma. Significantly enough, suffixes denoting ornaments are not found in the names of the brahmana classes.

Suffixes indicating the crest, Sehara and Kūta are found in the names, Aggisehara, a king of Vārāṇasī and Tisehara, a vidyādhara king who had probably three crests in his crown. Flowers also were used as crests. This is exemplified by the name Pupphakūtā the name of a queen.

Queen Suvaṇṇatilayā had a golden tilaka on her forehead. While Nayaratilaka Vidyādhara had a place of prominence in the city. Maid servant Vasaṁtatilakā was the pride of spring.

Maṇikuṇḍali, Vidyādhara king had ear ornaments studded with rubies. Another example, Sakuṇḍali is also from vidyadhara group.

Hemaṁgaya, a king, Laliyaṁgaya, a Sārthavāha, Viraṁgaya, a vidyādhara king, had in their names, aṁgada (armlet) as a suffix.

Along with Siridāma, the name of a king, signifying that he had a very beautiful belt, we know of one Naladāma, who was a trader. It is, however, very difficult to catch the significance of the bamboo belt worn by a man (Naladāma).

5. PROSPERITY : Some suffixes are indicative of prosperity, power and adorability. They are Sirī, or Siri, Vasu, Vaddhana, Vaddhanā, Paï, Deva, Devī, and Pujja. Suffixes Siri and Sirī were added to show the dignity of a person. In the case of Pajjuṇṇa and Sāmba, it was added alternately with Sami. Cārudatta, a trader was generally called by his friends as Carusami. In the case of women the suffix siri only was added, and we find it attached with names of respectable ladies only from all the classes. It was noted only once in the case of a vidyādharī and brāhmaṇī, while it occurs more frequently in the names of women from trader's class and from royal family. Siri was invariably associated with the material prosperity and dignity. This can easily be surmised from the sheer absence of this suffix in the names of servants and other ordinary people. Daṇasirī, a princess, Candasirī, a Sārthavā hi, Gaṁgasirī brāhmaṇī are the examples. The suffix vasu was found only in the names of the traders such as Nāgavasu and Daṇavasu. Raṭṭhavaddhana is the only example of suffix Vaddhana. We know more of the use of this suffix in the names of the Maukharis viz., Harshavarddhana etc. One vidyadharī is also named Pīivaddhana. Cedipaī, Payāvaī and Puhavipaī were all kings. Suffix deva is common to all the classes and groups except the lower class. Sūradeva is a king, Akkadeva, a vidyādhara king and Somadeva, a brāhmaṇa. The corresponding form of the suffix deva in the feminine form, i.e. devi, on the other hand is only to be found in the names of the queens Mittadevī and Asuradevī, the latter being a vidyādhara queen. Suffix Pujja has two illustrations. The first Vāsupujja is a Tirthaṁkara while the other, Kanagapujja, is a trader.

6. NATURE : Nature had also some part to play in these suffixes e. g., Mitta (sun), Caṁda, Giri, Sagara, Latā, Mālā, and taddhita formations of Mālā, viz., Māli, Mālinī.

Mitta has two meanings, the sun and a friend. This is found in the names of the royal families and those of the traders. Sumitta and Piyamittā are from royal family, while Dhaṇamitta, Bhaddamitta etc., are from other classes. Mitta has more examples in the names of the traders than in those of the royal families. Curiously enough, mitta as a suffix is not met with in the names of the women of the trader class.

Caṁda (moon) has as many as eight examples in the names of the kings. Caṁda is found in a singular example Somacaṁdā, to be of a feminine group. Aruṇachaṁda and Nayaṇacaṁda are examples in Vidyādharas and Sāgaracaṁda is a trader.

Suffix giri is found only in the names of the kings from Harivaṁsa. Suffix Sāgara is found in Maïsāgara, the name of a minister and Thimiyasāgara, the name of a king.

Latā as a suffix is attached to the names of the princesses. In the case of the maid servants a diminative form of latā, i.e., Latikā is used. Suffix Mālā, has been in vogue, in the names of the ladies from the royal family, vidyādhara group, traders class and in the names of maid servants. Suffix Māli has only two examples, both of kings, viz., Accimālī and Merumālī, the former being a vidyādhara. The corresponding form of Mālin in feminine gender, is Mālinī. This is found more in the names of the ladies from the royal class. One example from Dāsī and two from Vidyādharī groups are also noted. In this case, the suffix Māliṇī seems to have been borrowed from the royal class by the vidyādharas.

7. AUSPICIOUSNESS : Another group of suffixes indicative of auspiciousness and happiness, consists of Dhamma, Bhūi, Bhaddā,-Bhadda, samma and sammā. Dhamma as a suffix has only two examples, while as a name it has more since Dhamma was the name of one of the Tirthaṁkaras. It denotes religion or duty. Both Siridhamma, and Hiraṇṇadhamma are kings. Bhūi has several examples, but it occurs only, in the names of the brāhmaṇas, like Aggibhūi and Naṁdibhūi. Bhūti, along with the meaning, 'sacred ash' also means prosperity. Suffix Bhadda is used by persons in royal families as in the names, Balabhadda and Vijayabhadda. It is also found in the names of traders, Puṇṇabhadda and Maṇibhadda. Bhaddā, corresponding feminine form of suffix bhaddā, is to be found in the names of a brāhmaṇa, Jasabhadda, Sārthavāhī, Subhadda and in that of a princess of the same name. Suffix Samma meaning happiness is attached only to the names of the persons in brāhmaṇa family. Somasamma and Somasammā are its examples.

8. MISCELLANEOUS : In this group are included very common suffixes such as datta, gutta, and possessive suffixes mat, mati, vati, ila and others which are insignificant because of their few examples.

The suffixes datta, dattā, gutta, pāla, pālita, dāsa, dāsī form a group by themselves. One common feature of these suffixes is that they have generally a name

of a deity before them. These indirectly suggest devotion to that deity from whom protection and favour is sought. Datta meaning 'given' is a very common suffix and is not restricted to any particular class. Ruddadatta and Jannadatta, are from the brāhmaṇa class, the names like Mahiṁdadatta and jinadatta, are from the royal class and Agaḍadatta is a sārathi. Nāgadatta and Siridatta are from the trader's class. Vīradatta and in Suṁkadatta are vidyādharas, while Kuberaddattā is a dāsī. No names of vidyādharis are formed by this suffix dattā. The two previous examples from Vidyādhara group show that this suffix was not quite in vogue among the vidyādharas. Suffixes Dāsī, Dāsa and Gutta are only in the names of the traders and are invariably associated with Araha and Jina which shows that they were followers of the Jaina religion, . Side by side, the idea of religious Dāsa-hood is also to be found in the religious literature. And this point becomes significant in the light of the information from the *Bhagavadgītā* which professes that with the help of Bhaktiyoga, the vaiśyas can attain mokṣa.[29]. The suffix Gutta needs some consideration. Though this observation does not settle the controversial problem of whether the Gupta kings were from a vaiśya family, yet the name in *Vasudevahiṇḍī*, with suffix gutta, follow the rules enunciated in *Mānavadharmaśāstra* and *Viṣṇudharmmottara* purāṇa which state that Gupta should be a suffix to the names of the Vaiśyas and the Śūdras[30]. Suffix Pāla is to be found only in the names of the kings, Pokkhalapāla and Śiśupāla. The idea of protection by the deity underlies these names also. The story about Śiśupāla, the king of Cedi is a famous one. Prince Pokkhalapāla was from Pukkhalāvaï vijaya of which Pukkhalāvï must be presiding deity.

POSSESIVE SUFFIXES : Suffixes Maï or Matī and Vaï or Vatī are to be found in the names of women from various classes-. The corresponding masculine forms of the above said suffixes which are Manta and Vanta are very rarely used as in the case of Aṁsumanta and Himavanta where they have not the full-fledged status of a suffix. As the nature of the suffixes Vatī, Matī and others is very general, they are to be found in the names of the persons irrespective of their class and caste. The examples are Vasumatī, a brāhmaṇī, Sirimatī, a princess, Aṁgāramatī, a vidyādhara princess, Jasamatī, a Sārthavāhī, and Prabhāvatī, a Pratīharī.

The suffix Mati can as well be interpreted to mean 'intellect' as in the case of Aṇaṁtamaï, a courtesan. We get corresponding examples in the males that of Vipulamati, who was a Cāraṇa-Sramaṇa.

Another Taddhita suffix like Matī and Vatī is Ila and Ilā generally attached to the name of the deity. They are for example, Jakkhila and Aggilā. These names formed by the suffix Ila are to be found only in the names of the brāhmaṇa class.

Suffixes Dhara and Dharī or Hara, Harā and Harī are utilised in the names like Nīladhara, Anuṁdari and Jasoharā. In these examples, Nīladhara means one wearing a Nīla jewel; Anuṁdhari probably means, one who has accepted the

29 BHAGAVADGITA IX, 32-33.
30 FLEET, J. F., *C.I.I.* Vol. III, p. 11n.

Anuvratas and Jasoharā means one who has earned fame. These suffixes are to be found in the names of the persons of all the classes.

The suffixes Karā, Karā, Dā, Piä, bindu have either very few examples to their credit or are very insignificant.

PREFIXES : Aï, Su, Mahā, A are the prefixes generally used in the names. They are used to accentuate some of the qualities suggested by the names either positively or negatively. For example, Aïbala, Surūva, and Aparājaya, in these Su is the most frequent one.

After making a thorough study of the names of the persons, their suffixes and prefixes, and analysing the same into different categories, the following conclusions have been arrived at :—

REGION AND BELIEFS : The brāhmaṇas followed a sacrificial religion as demonstrated by the names Jaṇṁadattā, Aggilā, Bahassaï and Suṇagamedha. The names like Arahadāsa, Jiṇadāsi and Jiṇapāliya given to the traders show that they formed the main core of the followers of the Jaina religion, along with the royal families which has been reflected in the royal names Amiā., Ajaya, Santi Sayampabhā. These names are formed after the names of the Jaina Tīrthaṁkaras.

Apart from these two religions, there seems to have been a Laukika or popular religion, which professed, the worship of the popular deities like Siri, Kāma, Kuvera, Iṁda, Varuṇa etc. Some of the deities quoted above are also presiding deities of the Nakṣatras. This popular religion was the common basis of both the religions mentioned above,. This can easily be seen from the names cited above belonging to all the classes of society.

One can have a fair idea of the popular beliefs current in those days when one examines the names given after the nakṣatras or their presiding deities, dreams and longings of the pregnant ladies. A peculiar custom refered to by *Anuyogadvāra sūtra* explained and noted by Hemacandra[31] seems to have been reflected in the names Dharaṇījaḍha. Though this custom of Jīvikāhetu names has been illustrated by the single example of a Brāhmaṇa, this custom mast have been common among all the classes of society. In the case of Ḍohala and Suviṇa groups, the examples given in *Vasudevahiṇḍi* pertain to the heroes who are great kings, cakravartins or leaders in Jaina religion. This practice also must have been like the previous one, a common custom of all the classes of society.

SOCIETY AND CUSTOMS : In general, there was a set system of naming a child from the point of view of both class and family. We know the royal families where princes were named after their grandfathers both from the father and mother side as in the case of prince Usabhaseṇa and Kavila. Epigraphic parallels are found from the family of the Guptas where there are two Candraguptas, and from the Vākāṭakās, where there are two Pravarsasenas. Though a child could be named after his ancestor including his grandfather,

31 Hemachandra's Commentary on *Anuyogadvarsūtra* pp. 133-35.

it was never to be named after his father. Only a partial continuation of the name of the father in the form of a core, with a change of suffix in the name could be done, as has already been noted in the names of the royal families. The change of suffix must have served, the practical purpose of differentiating the son's name from the name of his father. Again, some set ending was observed in the genealogy of *Harivaṁsa* in the form of the suffix-Bala and Bāhu. The epigraphs have the parallel from the Gupta dynasty where the suffix Gupta is continued in the names of the kings of that family. In fact this suffix becomes so much important that the family is named after the suffix only, i. e., Guptānvaya.

This practice of naming a child after the ancestors observed in the epigraphs in the case of royal families only was prevalent among all the classes, as is shown by the examples of Nārada, a brāhmaṇa, and Kāmadeva, a Seṭṭhī.

Patronymics such as Vāsudeva and Nābheya have their parallels in the name Kāca from the Gupta epigraphs which was probably that of Samudragupta. Kāca means a descendant of Kaca. If we take the name Kāca, strictly to mean Kaca's son, as in the case of Vāsudeva, a name applied to Kṛṣṇa, this epithet Kāca may be applied to Samudragupta's father Chandragupta as well, whose father's name was Kaca (Ghatotkacha).

As compared to the patronymics, the metronymics are more in number. Also, they are more significant. Vīrasenajasavatīsuya has parallels in the epigraphs, in Gautamīputra from Sātakarṇi, Vakaṭaka and Kusha dynasties. Alike Vasu, Uparicara and Siśupala, king Khāravela is also called Cedipati.

KSATRIYA CLASS : Names and suffixes, indicating valour or military power were generally associated with names of kṣatriya class especially, with those of the kings. Names from Vākāṭaka family, Pravarasena[32] and the name Balavarman,[33] a king of north India, and the name with the suffix Jaya in the Pāṇḍu Vaṁśa line are the parallels for the names occuring in *Vasudevahiṇḍi*. The name Kaṇagasatti has a parallel in the founder's name of the Vākāṭaka line viz., Vindhyaśakti. As we have observed, one of the striking features of the names of kings in *Vasudevahiṇḍī*, is the appellations taken by them, as Amittadamaṇa and Rivudamaṇa, we know that Koṇika, the son of Bimbisāra was also known by such appellation like, Ajātaśatru. The practice of taking such appellations is also noticed in the epigraphs of the Vākāṭakas. The king Mahāsivagupta was also called Bālārjuna, because of his skill in archery.

VIDYADHARA KINGS : We have no parallels in large numbers for the names of the vidyadhara kings in the epigraphs. In addition to the special feature of the names of the kings, they have some special characterstics in their names coming from their vidyādharahood., The peculiarities in the Vidyādhara names are the names such as Meha, Vijju, Māṇasa, Asaṇi and Sīha, as the core of the names, and Vega, java, ghosa, daḍha, kuṇḍali and others as their characterstic suffixes.

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32 GOKHALE, S., *op. cit.*, p. 143.

33 FLEET, J. F., *op. cit.*, p. 13.

The names of the kṣatriya type are found in the names of sārathis and amātyas, a phenomenon which shows that kṣatriyas had accepted those professions which were allied to their profession of a warrior.

BRĀHMAṆS : Along with the names indicative of the sacrificial religion, brāhmaṇas had the names after the popular deities also. We get a corroboration of all these names from the epigraphs. Names of the brāhmaṇas, after Śiva, Brahma and viṣṇu are to be found in the early epigraphs of Madhya Pradesh.[34]. The suffixes peculiar to brāhmaṇas are Samma and Bhūi, of which Samma gets a corroboration from the Vākatāka records[35], whereas, Bhui is completely absent in them. The names after Kāmadeva are absent with the Brāhmaṇas, in *Vasudevahiṇḍī*, as is corroborated negatively from the earlier records of the Madhya Pradesh. In the Paramāra records of Madhya Pradesh and those of Badāmi Chalukyas in the Deccan, we get the earliest reference to the name of a brāhmaṇa, as Madana.[36]

TRADER CLASS : The peculiarity of this class is the names after Kāma, Kubera, Dhaṇa, Araha, and Jiṇa. The suffixes particularly found in this class are Dāsa, dāsī, gupta and Pālita. The suffix, Gupta remains controversial in the light of the discussions done by FLEET[37]. The suffix Dāsa also occurs in the name of one Brāhmaṇa, Gollādāsa, in the epigraphs of Madyapradesh.[38] From the names Araha and Jiṇa, it can easily be deduced that this class formed the core of the followers of Jainism.

LOWER CLASS : The names Cilāyigā and Babbarī show the importation of the servants from other countries. The names like Mahaurakiriyā, Maṁjuliyā, Kalahaṁsī, Kāmapaḍāgā and Raṁgapaḍāgā show their expected perfection in the field of Music and dancing. One peculiarity of the suffixes should be noted in the case of the names of the servants. Generally, these servants had similar names with those of the upper class, especially, the Kṣatriya and the Vaiśya. So, to differentiate the names from the higher class, the diminitive form of the suffix was used. Seṇiyā for Seṇā, Maliā for Mālā are the examples. Servants like Dhātrī and others were appointed as friends of the princesses, and other higher class ladies. And naturally, some sort of intellectual capacity was expected from these, which can be seen in the names of Paṇḍitikā and Suppabuddhā.

PROFESSIONS : Sometimes, while referring to a person, in the course of narrative, only the profession of the person is mentioned, without any reference to the caste to which the person belonged. On the basis of the previous information, here we try to glean what professions were adopted by the people from various classes. Śramaṇās and Tāpasa : In fact, Śramaṇahood cannot be called a profession. Here, it has been considered so, strictly from the technical point of view. The names of the Tāpasas mainly consist of the names of the royal family and the

34 GOKHALE, S., *op. cit.*, 156.
35 *Ibid.*, p. 202.
36 *Ibid.* p. 172.
37 FLEET, J. F. *op. cit.*, p. 11n.
38 GOKHALE, S., *op. cit.*, p. 195.

brāhmaṇas. The names Somacaṁda and Somappaha and Agatthi show that the old names were retained after accepting the Tāpasahood. In contrast, names from all the classes are to be observed in the names of the Sramanas. This shows that persons from all the castes could enter the Jaina monkhood. Only one feature is interesting in the names of the Sramaṇas. That is, sometimes a change of name was done when a person embraced monkhood. Daḍhacitta, a śramaṇa, gave to his desciples, who were thieves previously the names like Daḍhadhamma, and Daḍharal after seeing their sincere desire to practice Dhamma. This practice is still followed among the Jaina Śramanas and is also to be found among the Śaṅkaracāryas.

Ministers : The names of the ministers, such as Saṁḍilla and Sīhaseṇa show that both Kṣatriyas and brāhmaṇas were serving under the king, in this capacity.

Dūtas : The names Ḍimbhagasamma, Marīci, and Caṁdasīha shows that together with the lower class the brāhmaṇas were also employed as messengers

Nemitti : A Nemittī (foreteller) was one who forecasts with the help of his observations of the natural phenomena. The names Bhigu, Payāvaisamma, Bahassaisamma are clearly drawn from the brāhmaṇa class. Koṭṭhugī, a nemitti seems to be from non-brahmin class. It is the name of a sūta in Markaṇḍeya purāṇa.

Purohitas : They were specifically drawn from the brāhmaṇa class,. Vissabūti, Soma, and Bhigu are some of the examples. The name Bhigu reveals more an Atharvanic nature of the Purohita.

Grāmeśaṣ : Nārada and Sūraya are the brāhmaṇas who are grameśvaras. They were in charge of the village Giritaḍa, as it was donated to their forefathers by the king Divāyaradeva. The other example from this category is that of Arahadatta who was the father of a Gāmaūda named Meru. The name Arahadatta seems to be from a Vaiśya family.

Chaura : The names like Kusīla, Visīla, Virūva, Maṁdarūva indicate the idea of ugliness, and cruelty. These names show that either the names were given by the people to them or they were faulty adaptations from an aboriginal language which the common people could not understand. In this context, it should be remembered that most of the thieves were from the Pulinda stock of the Vindhyas. The names Avajjha and Saraha show the valour of the thieves, while the names like Bhaggapuda and Vibhaggapuda attract our attention to the snubbed noses of the Pulindas.

The leaders of the Chauras are named Ajiyasena, Aparajīya, Ajjuṇaä etc., which are generally to be found in the warrior class. That sometimes the dissatisfied warriors might have adopted this profession can be known from the story of a prince Pabhava. This prince turned to this profession as he could not succeed his father as a king though he was the eldest son in the family.

Magicians:

In the whole narrative of *Vasudevahiṇḍī*, only one magician has been referred

to. His name is Indasamma. The suffix Samma clearly shows that he is a brāhmaṇa, while the name Iṁda is associated with the Indajāla, web of Indra, denoting magic.

The writer is indebted to the editors Caturvijayaji and Punyavijayaji who have prepared an invaluable index of the Viśeṣanāmas in *Vasudevahiṇḍī*. While writing this paper, the writer has profusely utilised this source of information.

RECENT EXPLORATIONS IN THE TUNGABHADRA BASIN—THE CHALCOLITHIC PHASE[1]

by

M. S. NAGARAJA RAO

The cultural history of Karnatak was considered to begin with the Mauryan epoch since the discovery of the Aśokan edicts at Brahmagiri, Siddapur, Jatinga-Ramesvara, in the Chitradurga district, Maski and Koppal in the Raichur district—all in the northern part of the present Mysore state. But it was M. H. KRISHNA of the Mysore Archaeological Survey, who discovered the ancient site at Brahmagiri and excavated there in 1942[2], with due regard to stratigraphy, bringing to light a new phase of an early culture, which has now been designated 'Chalcolithic'. In 1947, the site was again excavated by R. E. M. WHEELER, who established a sequence of cultures based on stratigraphic evidence, viz., the stone-axe culture, the megalithic culture and the Andhra or the Early Historic Culture, with an appreciable overlap in between.[3] Similar results were later obtained by the excavators of Sanganakallu[4], Maski[5] and Piklihal[6] in the Raichur doab. These results gave a fillip to the study of protohistory in peninsular India and many sites of the Chalcolithic period were discovered and excavated in Central India and the Deccan. The chief among them are : Nagda on the Chambal, Navda-toli and Maheśvar on the Narmada, Prakashe and Bahal in the Tapti-Girna valley, Nasik, Jorwe, Daimabad and Nevasa in the Godavari-Pravara basin and Chandoli on the Ghod. Though all these sites have exhibited regional differences and the homogeneity of this culture has not been established, there has been a broad uniformity in the equipments of this culture, viz., the use of painted pottery, microliths and, to a restricted degree, copper; and the typological similarity of polished stone axes, particularly of Brahmagiri and Nevasa.

[Havelock Memorial prize for the year 1962–63 has been recommeded for this paper.]

1 The writer is extremely grateful to the Director General of Archaeology in India, for permitting him to utilise the material, in the preparation of this paper, collected by the writer during his explorations in Dharwar district, as an official of the Archaeological Survey. Grateful thanks are also due to the Superintendent, Archaeological Survey of India, Southwestern Circle, Aurangabad, for the illustrations.

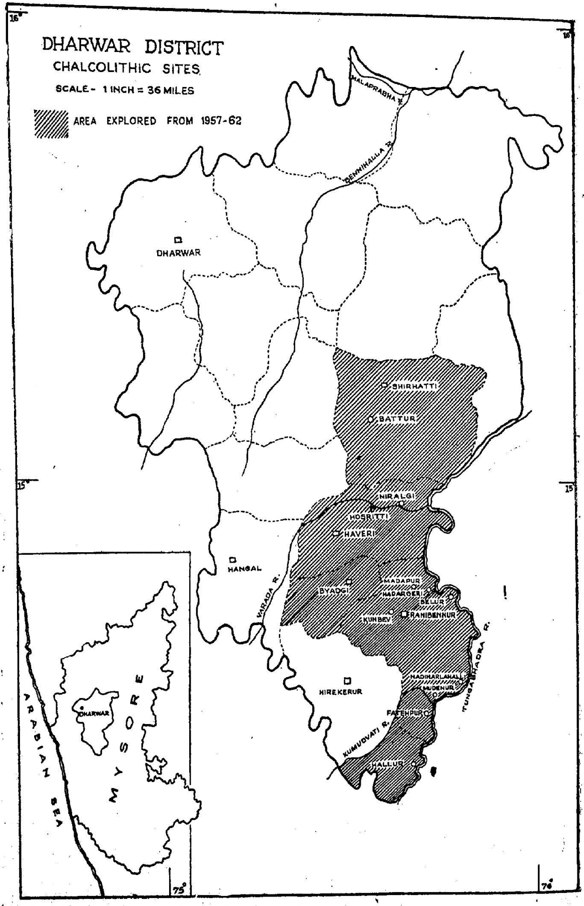
2 *Annual Report of Mysore Archaeological Survey for* 1942 (1943).

3 WHEELER, Sir R.E.M. 'Brahmagiri and Chandravalli' 1947: Megalithic and other cultures in Mysore State., *Ancient India*. No. 4, 1947-48.

4 SUBBA RAO, B., *Stone Age Cultures of Bellary* (1948).

5 THAPAR, B. K., Maski — A chalcolithic site of Southern Deccan, *Ancient India, No.* 13, 1957.

6 ALLCHIN, F. R., '*Piklihal Excavations*', Andhra Pradesh Government Archaeological Series, No. 1, (1960).



DHARWAR DISTRICT
CHALCOLITHIC SITES
SCALE - 1 INCH = 36 MILES
AREA EXPLORED FROM 1957-62
16°
16°
MALAPRABHA R.
BENNIHALLA R.
DHARWAR
SHIRHATTI
BATTUR
15°
15°
NIRALGI
HOSRITTI
HAVERI
HANGAL
VARADA R.
BYADGI
MADAPUR
HADARGERI
BELUR
KUNBEV
RANIBENNUR
TUNGABHADRA R.
HIREKERUR
NADIMARLAHALLI
MUDENUR
FATEHPUR
KUMUDVATI R.
HALLUR
ARABIAN SEA
MYSORE
DHARWAR
75°
76°

Map. A

With the systematic excavations at the sites mentioned above during the last decade and more, a large mass of material accumulated and hence it was possible to build up a cultural sequence for the different regions. Yet the fresh problems which cropped up as a result of the excavations still remain to be solved. So far as Mysore is concerned, the two main problems which are vexing the minds of the archaeologists are : the contacts and correlations between the chalcolithic or the stone-axe culture of the south and the chalcolithic culture of the northern Deccan and Central India; and the other, which is equally enigmatic, is the relationship between the chalcolithic cultures and the megalithic cultures of the south itself. As Mysore is situated between the southern peninsular region and the northern Deccan, it could be expected to possess the clues which would contribute towards the solutions of the problems cited above.

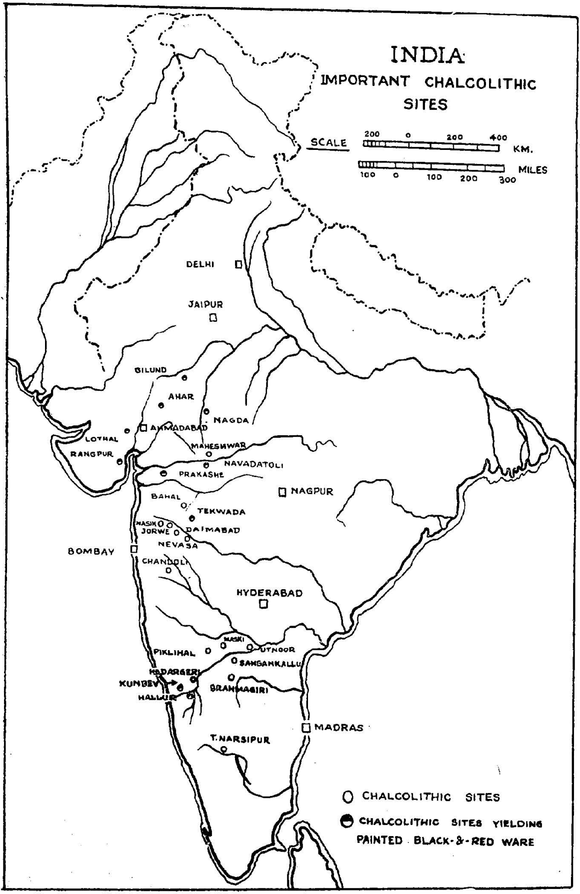
A glance at the map of Mysore is sufficient to bring home the importance of its northern regions, comprising roughly of the area generally known as 'the Bombay Karnatak'. In this region, the district of Dharwar occupies a very important position in the context of the chalcolithic cultures of the Deccan, as it lies on the northern fringe of the state with closer proximity to northern Deccan on the one hand and the well-known Brahmagiri situated to the east on the other.

The discoveries made in the Tapti-Godavari valley and the Raichur-Doab amply demonstrated the necessity for a thorough exploration in the region of northern Mysore, in order to find out the nature and extent of the chalcolithic culture. Therefore, explorations were carried out by the writer in the Tungabhadra basin, in the Dharwar district, the results of which form the subject matter of this paper.

Geologically, the district belongs to the three wellknown formations, viz., i. the Eastern black-soil plain, underlain by the basal archaeon complex, largely consisting of the ancient gneiss and schists; in this are situated several outliers of quartzite of the Kaladgi series; ii. the central portion, marked by an outcrop of two parallel bands of the famous Dharwars, the geological structure of which is extremely complex and is associated with a variety of rocks ranging from granatoid schists to chlorite schists and gneisses; iii. the western extremeties are occasionally characterised by the outcrops of the basal igneous complex. The western margin is flanked by the Sahyadris. The rest of the district is an undulating plain.

The district is drained in the north by the river Malaprabha with Bennihalla as its chief tributary. The Tungabhadra river system, mainly consisting of the tributaries Varadā and Kumudvatī, drains the southern and south-eastern borders of the district. Only a small tract of land west of Dharwar is drained to the Arabian sea by the Shālmalā river.

Intensive explorations were carried out in Haveri, Byadgi, Ranibennur, Shirahatti and the eastern part of Hirekerur talukas—all situated in the south and south-eastern part of the district, and drained mainly by the Tungabhadra with its tributaries, Varadā and Kumudvatī, fed by many minor streams. Besides sites yielding stray palaeolithic tools, many sites ascribable to the chalcolithic, megalithic and early historic periods were discovered. Of these, only the following sites, ascribable to the chalcolithic period, have been dealt with in this paper :—


INDIA
IMPORTANT CHALCOLITHIC SITES
SCALE
200 0 200 400 KM.
100 0 100 200 300 MILES
DELHI
JAIPUR
GILUND
AHAR
NAGDA
LOTHAL
AHMADABAD
RANGPUR
MAHESHWAR
NAVADATOLI
PRAKASHE
NAGPUR
BAHAL
TEKWADA
NASIK
JORWE
DAIMABAD
NEVASA
BOMBAY
CHANDOLI
HYDERABAD
MASKI
PIKLIHAL
UTNOOR
SANGANKALLU
HADARGERI
KUNDEV
HALLUR
BRAHMAGIRI
MADRAS
T. NARSIPUR
CHALCOLITHIC SITES
CHALCOLITHIC SITES YIELDING PAINTED BLACK-&-RED WARE

Map. B

1. Hallur
2. Mudenur
3. Nadiharalahalli
4. Belur
5. Hadargeri
6. Madapur
7. Kunbev
8. Niralgi
9. Battur.

(see map ' A ' for the location of these sites).

HALLUR (Lat. 14° 21′ E. : Long. 75° 38′ N. 1 inch to 1 mile map 48 N/11)

This village is situated on the left bank of the river Tungabhadra, at the southern most end of the district in Hirekerur taluka. It is about 95 mile south west of Brahmagiri in the neighbouring district of Chitradurga.

The ancient mound locally called 'Kōṭe' is situated just on the northern fringe of the present village, on the left bank of the Tungabhadrā. It is a considerably undisturbed mound with a cultural deposit of more than 40 feet height. The antiquities collected from the surface show that the site was occupied from the chalcolithic to the medieval periods. It covers an area of about 10 acres of land, bearing Survey Numbers 7, 8 and 10. The antiquities collected are : Palaeolith (1), Polished stone axes (35), pottery, terracotta sharpeners and pottery discs.

ALAEOLITH : A cleaver, rectagular in shape, of quartzite, with a sharp, wide, working edge.

NEOLITHS :

All the tools are made of fine-grained black trap; most of them have pointed butt and a sharp, polished, working edge. Selected specimens are illustrated :

1. An elongated axe, with flaked surface. One of its margins is flat being the original cortex. Lenticular in section. Only the working edge is slightly polished. The butt-end is blunted. (P1. I, No. 1.)
2. Axe with a broken butt end; working edge is also mutilated. Ovoid in section; Well polished all over. (P1. I, No. 2.)
3. Rectangular axe, broken, ovoid in section, having a pecked surface and well polished working edge; Margins are straight. (P1. I, No. 4.)
4. Axe, with a pointed butt end, ovoid in section, pecked surface, polished working edge. (Pl.I,No.5)
5. Axe, broken, lenticular in section, with an intact polished working edge. (P1.I, No.6)
6. Axe, with an unpolished surface, blunt butt end and rough working edge. (P. I, No. 10)
7. Axe, with pointed butt end, ovoid in section, and mutilated, polished working edge, having a well-ground surface. (P1. I, No. 14).

POTTERY :

The collected pottery could be classified into the following wares, viz. : I. Grey ware, II. All Black were, III. Painted Black-and-Red ware IV. Black-and-Red ware of the Megalithic variety, V. Ruset-Coated Painted ware and VI. the Red-slipped ware.

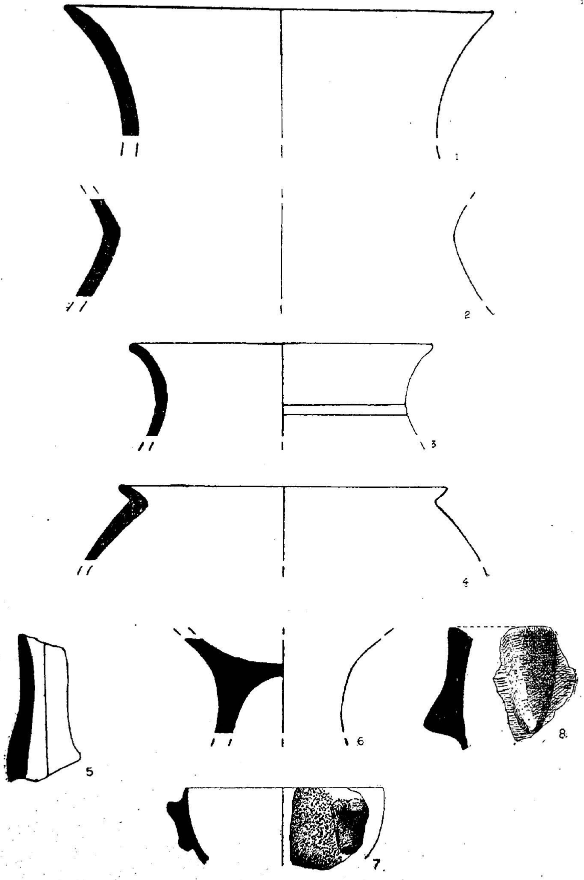


Fig. 1
Nos. 1–6. Hadarageri. 7–8. Mudenur.

Grey Ware : This ware has a burnished grey surface and a considerably fine core. The types represented in this ware include bowls, vessels with globular bodies having thin sides and also spouted vessels.

7. Fragment of a tubular spout of vessel is illustrated. (Pl. II, No. 1). Analogies come from Brahmagiri[7], *Cf. Fig.* 23, *T.* 76 p. 231.

All Black Ware : These have an absolutely black, burnished, shining surface and a fine core. The chief types represented by this ware are illustrated.

1. Rim fragment of a highly burnished black ware vessel with a concave neck flaring rim and rounded edge, with a ledge on the exterior. (Fig. 4, No. 1)

2. Rim fragment of a vessel, with concave neck, sloping shoulders and an out-turned, rounded edge. (Fig. 4, No. 3).

3. Rim fragment of a vessel with concave neck and everted rim, with a groove and ledge on the exterior. (Fig. 4, No. 2.)

4. Rim fragment of a burnished black, globular vessel, with a round body, constricted neck, everted and internally sloping rim which is rounded. (Fig. 4, No 4)

5. Fragment of a small neckless pot, with a weak carination on the body, sloping shoulders and outcurved, undercut rim. (Fig. 4, No. 5)

6. Bottom portion of a bowl, with a flat, tapering base and flaring sides. (Fig. 4, No. 6)

7. Fragment of a shallow bowl, with out-turned sides and weakly carinated shoulder, the base tending to be a rounded one. (Fig. 4, No. 11)

White Painted Black-and-Red ware :

A few sherds of this ware are found from the surface. They have a burnished black interior and black-and-red exterior. The colour is pinkish red. They are painted in white on both the exterior and the interior, with groups of vertical and oblique strokes. The paintings are very faint in some cases and are visible only when they are tilted in light. From a comparative study of the pottery from Ahar, Gilund and other chalcolithic sites, these sherds could well be placed in the chalcolithic phase. Though it may be pointed out that exact parallels in the painted motifs could not be had, a close study reveals an affinity in the style of the execution of the pattern. Moreover, no white painted black-and-red ware of this type, has so far been reported from megaliths. The chief types represented by them are bowls, tulip-shaped shallow bowls and *conoids*. The chief types found in the site are illustrated.

1. Fragment of a shallow bowl, with a rounded base, having a very thin section, slightly everted thin edge, with a groove on the exterior. Painted on the exterior with groups of 7 & 4 oblique lines, slanting to right and left at intervals. (Fig. 3, No. 3).

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[7] When such comparisons are given, the figures and types refer to the illustrations in the respective reports of excavations.

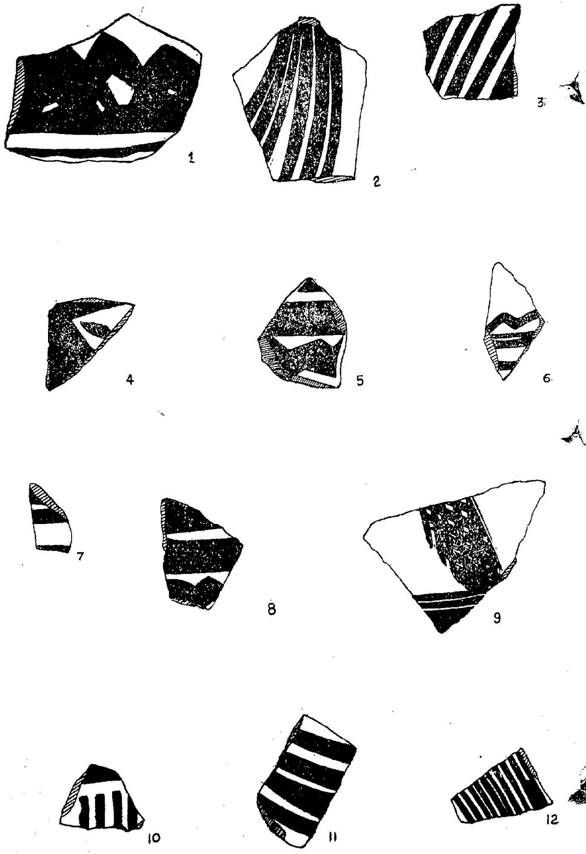

Fig. 2
Hadarageri

Analogies in shape from Brahmagiri : *fig.* 9, *C.* 3, *pp.* 209 & 210. This shape is typologically akin, though not exactly similar, to some of the type found in chalcolithic pottery.

cf. Navda-toli, *T.* 39, *i*, *Fig.* 34.

2. Fragment of a bowl, with flaring sides, rounded rim, with a groove on the exterior and probably having a flat bottom. Painted in white on the exterior, with double groups of slanting strokes, of 9 or more (Fig. 3, No. 5).

Similar painted design, but only one group of 5 strokes, is found, on bowls from Gilund (such sherds are exhibited in the Safdarjung Museum, New Delhi).

3. Rim fragment of a bowl, with a broad mouth, everted sides, rounded edge, with a slight bevelling on the exterior and tending towards a rounded base; Painted in white on the exterior, with a group of 8 oblique strokes, slanting to left (Fig. 3, No. 4).

Analogies in shape come from megalithic Black-and-red ware of Brahmagiri and Maski.

cf. Br. Fig. 17, No. 11, p. 223

Msk. Fig. 20, B (v) 5, p. 61

4. Rim fragment of a shallow bowl, tulip shaped, externally, thickened and probably having a rounded base; painted in white with a group of 7 vertical lines in the interior, which are very faint. (Fig. 3, No. 2)

Analogies in shape come from Brahmagiri, megalithic B-&-R ware. cf. Fig. 10, C. 14.' p. 211 & Fig. 14, P. II b, p. 218.

5. Sherd of a burnished Black-and-red ware, probably of a conoid, i.e., an elongated, vase with a long tapering body; painted in white on the exterior with vertical bands. (Fig. 3, No. 6) For shape, cf. Brahmagiri. Fig. 13, P. 1 & P. Ia. There it is used as a lid.

6. Sherd of a painted Black-and-red ware belonging to the body portion probably of a bowl; painted in white in the interior with groups of oblique bands of 8 or more (Fig. 3. No. 8).

7. Sherd of a painted Black-and-red ware, probably belonging to the body portion of a bowl, painted in white in the interior with groups of strokes at random, of 7 and 6. (Fig. 3, No. 9).

Black-and-Red ware : The ware is of medium fabric and thickness, having a well burnished black interior and a black-and-red (dull red) exterior. The types represented are small pots, with short narrow necks and flaring rims; vessels, with everted sides and rim, and beaded and externally grooved rims, and bowls. The chief types are illustrated.

1. Rim fragment probably of a small vessel with flaring sides. The external colour is black-and-greyish red. (Fig. 5, No. 1).

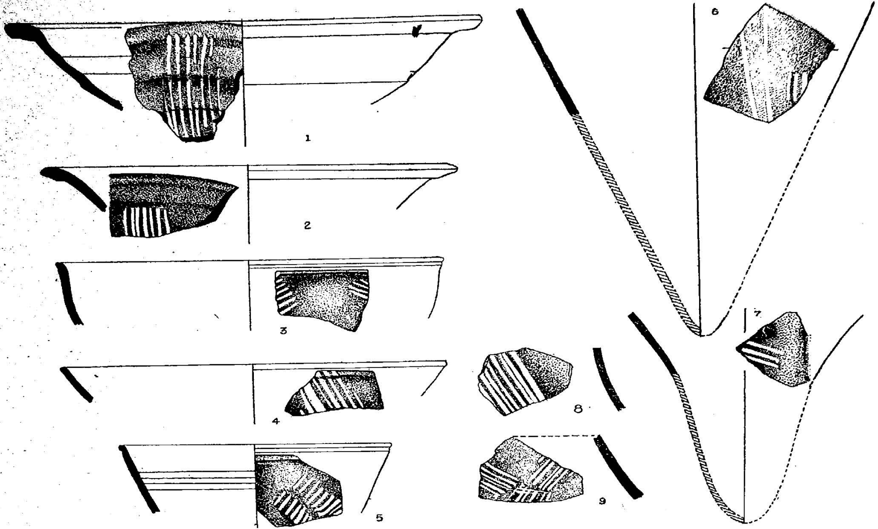

Fig. 3.
Nos. 2–6, 8 and 9 from Hazur 1 and 7 from Kunbev.

2. Fragment of a shallow, tulip shaped bowl, with flaring and everted, beaded out rim, weakly carinated, tending towards, probably a rounded base. (Fig. 5, No. 2). Analogies come from Brahmagiri and Maski.

cf. Br. Fig. 14. p. 11. pp. 215.

Maski. Fig. 17. B. (ii) 9b.

Regarding this shape, WHEELER says, 'the occurrence of this type in definite stratified layers of habitation area at Brahmagiri, provides an important link, between them and the megaliths'.[8]

3. Rim fragment of a bowl with wide mouth and everted rim, rounded edge with a groove on the exterior. (Fig. 5, No. 3).

Russet-coated Painted ware : A few sherds of this ware, having the usual kaolin painting on the exterior of the Black-and-red ware of the early historic period, were also found from the surface of the mound. The principal type in this ware is the bowl with convex sides. The designs include the famous criss-cross pattern, oblique lines, groups of wavy lines interspersed with thick dots, vertical and radiating bands and the ladder patterns.

Red-slipped ware : This ware of the early historic period has a red slip with a surface crackled at places, probably because of salt glazing. It is coarse in fabric. Similar pottery has been found from the Satavahana levels during the excavations in the ancient sites of Deccan. The chief types represented by this ware are bowls, pots, thick storage jars, dishes and lids.

TERRACOTTAS :

Two sharpeners made of potsherds and three unpierced discs are the terracotta objects found.

MUDENUR[9] :

(Lat. 14° 29′ E. Long. 75° 43′, N. 1 inch to 1 mile map, 48 N. 11.)

This place is situated in the Ranibennur taluka, on the left bank of the river Tungabhadrā and at the confluence of river Tungabhadrā and Kumudvati. It is about 84 miles southwest of Brahmagiri. Apart from the remains of on old temple and two inscriptions, belonging to the reign of Western Chalukyan king Vikramaditya VI, dated A. D. 1128, there are three ancient sites.

Site II which is situated to the northwest of the village on the left bank of the river Kumudvati, in survey No. 26 is an early historic site, yielding pottery and other antiquities usually found in the Satavahana levels of the excavated sites in Deccan.

But Sites I and III, yielded grey ware which has been found in the chalcolithic levels.

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8 WHEELER, *Ibid* p. 215.

9 *I.A.R.* (Indian Archaeology — A Review), 1959-60, p. 38.

Site I is situated to the south of the village, on the left bank of the river Tungabhadrā, in Survey No. 123. It extends in an area of about 3 acres of land which has now been converted into cultivable land. The pottery found could be classified as follows :

Grey Ware : Only six sherds were found from the surface. They have a burnished grey slip and are of medium thickness. They seem to be of globular vessels.

Black-and-Red Ware : Sherds of medium thickness and coarse core were found in considerable quantity. They seem to belong to the early historic period. The main types are the convex sided bowls, with incurved sides and rounded bases, and vessels with globular bodies.

Red-slipped ware : Usually found in the early historic levels of the excavated sites, this ware is found in profuse quantity.

The only noteworthy feature in this site is the absence of the russet-coated painted ware or the Andhra criss-cross ware which is found in profuse quantity in site II just about 2 miles north, on the bank of Kumudvati, and in Site III.

Site. III : This is situated to the southeast of the village, at a distance of about a mile and a half, on the left bank of the river Tungabhadrā, in the cultivated land bearing survey nos. 110/1 and 110/3 and extends in an area of about 3 acres. The section on the river side is about 25 feet in height and shows pottery *in situ*. The site yielded the following antiquities :

1. A fluted core of chalcedony.

2. Neolith : A celt of black trap conical in shape and having a pointed butt end. The working edge is well polished and the sides have pecking marks. Part of the working edge is broken. Some lime encrustration is found on one side. It is plano-convex in section.

3. POTTERY : The pottery collected could be classified as follows :

Grey ware : A few sherds were found. They are well burnished and represent the urn type. There are also bowl type of which two are noteworthy.

Small bowl, hemispherical in shape, of thin, coarse, burnt-black section, with a pinkish grey slip and slightly incurved sides and flattened rim. On the exterior is an applique design representing the face of a bull or cow (?) (pl. II, No. 5; Fig. I. No. 7)

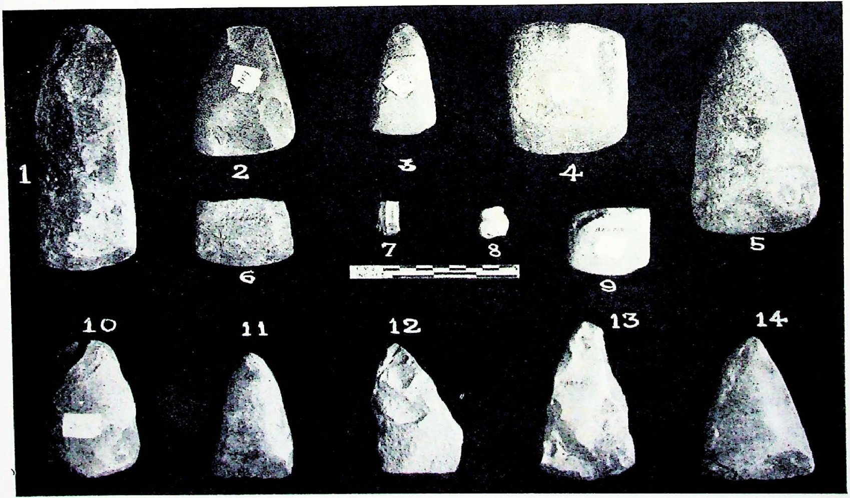
Another fragment of a bowl, of blotchy grey ware with a thin, coarse, burnt-black section, also having an applique design like a lug-handle. (Pl. II, No. 3; Fig. No. I, No. 8)

Black-and Red ware : This ware, belonging to the early historic period is also found. The usual bowl type, typical of the early historic period, predominates the shapes.

Russet-coated ware : This ware, similar to the ware described under Hallur, was also found in this site, although in small quantity.

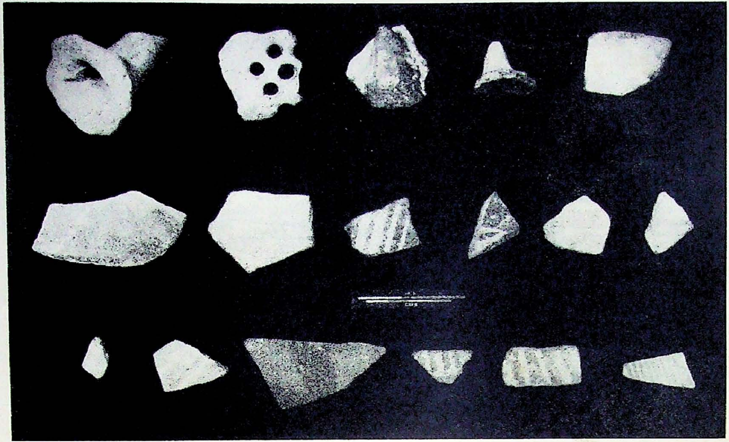
Red-slipped ware of the variety described in Site I & II was also found.

NEOLITHS AND MICROLITHIC CORES.



Nos. 1, 2, 4-6, 10 and 14 from Hallur. 11 and 12 from Nadiharlahalli. 13 from Hadarageri. 3 and 8 from Fatehpur. 9 from Bellatti. 7 from Hosaritti.

GREY WARE AND PAINTED POTTERY



1 to 5

6 to 11

12 to 17

No. 1 from Hallur
No. 2 & 4 from Hadarageri
No. 3 & 5 from Mudenor
No. 6–17 from Hadarageri.

NADIHARALAHALLI[10]

(Lat. 14° 34′ E. Long. 35° 49′ N. 1 inch to 1 mile map 48 N/14)

The village is situated on the left bank of the river Tungabhadrā, in the Ranibennur taluka, about 80 miles south-west of Brahmagiri The chalcolithic site is located to the south of the village in the cultivated land bearing survey no. 28, on the left bank of the river. It extends in an area of about 8-10 acres. The following antiquities were collected from the site :

NEOLITHS : 5 specimens of celts are found. They are made on black trap and are polished. Of these, two are illustrated.

1. Axe, with a pointed butt end, plano-convex in section, with a polished working edge. The surface is well ground (Pl. I. No. 11).

2. Axe on a flake : Flat on one side and some shallow flake scars on the other; The working edge is sharp and straight. The surface is not polished (P 1. I No. 12).

POTTERY : Profuse pottery is available on the site which can be grouped as follows :

Coarse grey ware : Fragments appearing to be of a single urn were found. They are dull brick-red on the exterior and greyish black in the interior. It is very coarse and gritty in texture. The neck fragment shows that it had a wide concave neck with splayed out mouth.

Besides this ware, pottery ascribable to the Early Historic period, consisting of *Black-and-red*, *Ruset-coated painted ware* and the *Red slipped ware* was also found profusely.

BELUR[11] :

(lat. 14° 43′ E Long. 75° 46′ N. 1 inch to mile map 48 N/14)

The village is situated on the left bank of Tungabhadrā, in the Ranibennur taluka. It is about 80 miles south west of Brahmagiri. The chalcolithic site in this village is located to the north west of the village, at a distance of about a mile and a half in the cultivated lands, on the left bank of the river. It extends in an area of about two acres. The antiquities show that the site was occupied from the chalcolithic to the medieval periods. Only pottery was available in the site.

The *Grey ware* represented by a few sherds, are burnished and have a blotchy surface. The main type is the Urn. Besides, pottery ascribable to the Early Historic period was also collected.

HADARAGERI[12]

(Lat. 14° 45′ E : Long. 75° 43′ N : 1 inch to 1 mile map. 48 N/10)

This village is situated on the left bank of the river Tungabhadrā in the Ranibennur taluka. It is about 80 miles south west of Brahmagiri. The present

10 *I.A.R.*, 1960-61, p. 28.

11 *Ibid.*

12 *I.A.R.*, 1959-60, p. 38.

village itself is situated on the ancient mound ascribable to the chalcolithic period, on the evidence of the antiquities. The southern part of the mound about 2 acres in area has been converted into cultivable land and bears survey No. 9. The rest of the mound is intact preserving a cultural deposit of about 20 feet. The culture-sequence as evidenced by the surface collection of the antiquities is as follows : The chalcolithic, the megalithic and the early historic.

The earliest culture is associated, as at Brahmagiri, with polished stone axes, with pointed butt and the typical pottery *viz.*, *Grey ware & painted black-on-red ware.*

The following antiquities were collected from the mound.

NEOLITHS : 15 stone axes, all made on black trap, were collected. They could be classified into the following varieties.

Broken axes, roundish in section, well ground, even surface, pointed butt end, the working edge being broken.

Axes ovoid in section, having polished surface and pecked marks.

Axes-only working half; lenticular in section with more or less straight working edge, and polished all over.

Axe-flat and rectangular in section, the working edge being broken and unpolished.

Adze—seems to be in the first stage of manufacture, i.e., with flaked surface and having patches of patinated original cortex; flat on one side and bevelled or bulging on the other with a slightly polished working edge; butt end seems to be pointed. (Pl. I, No. 13)

Hoe — (?) long, ovoid in section without any polish, but with pecked marks. One end is pointed. It is more or less uniform in size.

Slick-stone : A complete specimen, oval in shape, flat and ground on one side and a convex bottom with natural depressions and cortex.

POTTERY :

The pottery can be classfied as follows :

Grey Ware : This ware consists of both coarse and burnished variety. They have coarse and gritty core, and are of varying thickness.

The coarse variety has a dull brick-red exterior and greyish black interior. Sand is also used in preparing the clay as seen from the core. The types included urns with wide concave necks and splayed out mouths, and also the perforated vessels.

The burnished grey ware include urns with globular bodies and flaring out rims, bowls with thin sides and spouted vessels. Bowl-or-dish-on-stands etc.

The main types are illustrated.

1. Rim fragment of an urn with a flaring, out-curved rim and probably a rounded body. (Fig. 1, No. 1).

Analogies come from Brahmagiri.

cf. Br. fig. 22, T. 47, p. 230.)

2. Neck fragment of a globular urn with sloping shoulders, concave, constricted neck and flaring rim. (Fig. 1, No. 2)

3. Fragment of a globular vessel with a narrow neck and splayed out edge which is rounded. The narrow neck has two grooves. (Fig. 1, No. 3)

4. Fragment of a pot with a globular body, sloping shoulders, constricted neck, everted rim and rounded edge. (Fig. 1, No. 4)

5. Tubular spout of a pot. It is short and seems to have been attached to the pot by building method. (Fig. 1, No. 5)

Analogies come from Brahmagiri. Cf. Br. Fig. 19, T. 34-35, Fig. 21, T. 46.

6. Stem portion of a dish-or-bowl-on-stand, with a squat stem, hollowed base, thick in section. The interior portion of the bowl is burnished black. (Fig. 1, No. 6) Analogies from Brahmagiri. (cf. Br. fig. 23, T. 74 & 76.)

7. Fragment of a perforated vessel of coarse grey ware with a burnt-black section and hand-made perforations. (pl. II, No. 2); Sanganakallu : Pl. VII. xi, p. 16; Maski : Pl. XX; A, No. 3; Fig. 13; No. 3, p. 48.

8. Fragment of lid with short conical knob, very coarse and handmade. (Pl. II, No. 4)

PAINTED POTTERY :

More than a dozen sherds of this pottery were found on the surface. They are the usual varieties found in the chalcolithic layers of the sites in the northern Deccan. Unfortunately, none of the sherds represent any types or shapes.

Cream-slipped painted ware : Very few sherds are found. They have a cream or pink slip, which is, in some cases, peeling off. They are painted in black. The sherds are illustrated.

1. Sherd of over-burnt cream-slipped ware, thick and coarse in section. It has a surface crackled at places and gives a metallic ring. Painted in black on the over-burnt surface, with a design of two horizontal bands and intersecting triangles above the upper band (Fig. 2, No. 1 & Pl. II, No. 6).

2. Sherd with a cream wash, coarse in fabric and thick in section. The wash is peeling off at places. Painted in black with vertical strokes starting from one place. Paintings are also faint (Fig. 2, No. 2. & Pl. II, No. 7).

3. Sherd of cream slipped ware, very coarse, but comparatively thin in section. The surface is crackled and is greenish in colour. The inner side shows continuous striation marks. Painted in black with three oblique strokes between thick oblique bands (Fig. 2, No. 3, & Pl. II, No. 8).

4. Orange or pinkish coloured sherd, coarse and thick in section. The slip is peeling off at places. Painted in black with horizontal bands below which is an oblique thick band, and a curvilinear stroke. (Fig. 2, No. 4, Pl. II, No. 9).

ALL BLACK WARE.

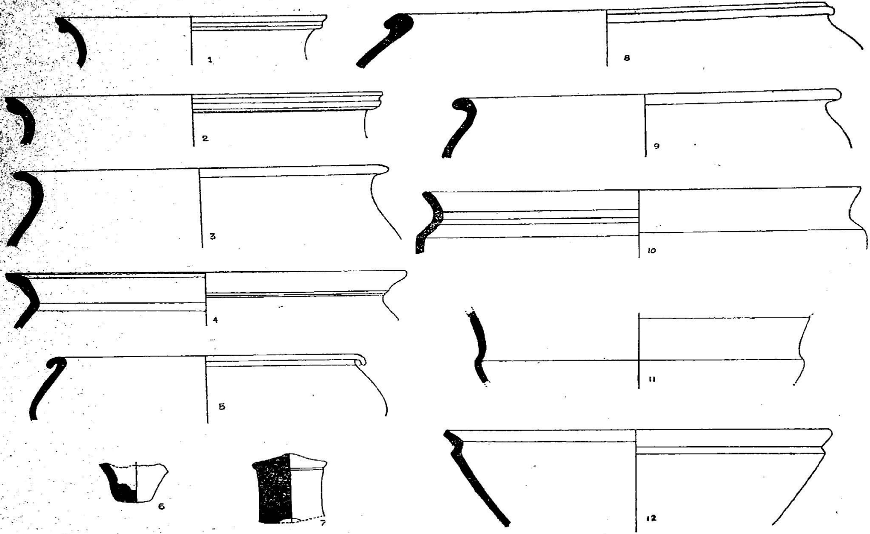


Fig. 4. Nos. 1–6 and 11 from Hallur; 7–9 from Hadarageri; 10 and 12 from Kunbev.

Jorwe Ware : Nearly a dozen sherds of this ware were found. They have a matt, red surface painted in black and giving the characteristic metallic ring.

1. Sherd of Pinkish slip with coarse red section. Painted in black with the design of two thick bands below which is a wavy line (Fig. 2, No. 5, & Pl. II, No. 10).

2. Sherd of pinkish slip, thick in section, coarse; slip is peeling off. Painted in black with two horizontal bands, below which is a wavy line. (Fig. 2, No. 6. Pl. II, No. 11)

3. Sherd having a coarse, burnt black section and a thick red slip. Painted with horizontal bands in black (Fig. 2, No. 7. pl. II, No. 12).

4. Red slipped sherd, coarse and thick in section having *striation* marks on the inner side. The red slip is crackled. Painted in black with two bands, below which is a wavy line, (Fig. 2. No. 8. Pl. II, No. 13).

5. Overburnt red, slipped sherd of Jorwe fabric with coarse and thick section, matt and crackled red surface with painted design in black of three horizontal bands and latticed design drawn obliquely above the upper band. (Fig, 2. No. 9. Pl. II. N. 14).

6. Red-slipped sherd of Joıwe fabric with red, matt surface, painted in black, with a horizontal band, below which are vertical, and wavy, straight bands (Fig. 2, No 10. Pl. II, No. 15).

7. Red-slipped sherd of Jorwe fabric with a burnt black section and matt surface, painted in black with thick curvilinear veıtical bands. (Fig. 2, No. 11 Pl. II, No. 16)

8. Red slipped painted sherd of jorwe fabric, painted in black with continuous vertical bands. (Fig. 2, No. 12. Pl. II, No. 17)

All Black ware : The ware is absolutely black with a thin section and a coarse core. Its surface is highly burnished and sometimes crackled. The types include, concave sided bowls, small vessels, lids with knobs etc. Comparatively this ware is in plenty. The main types are illustrated.

1. The rim of a neckless pot with a bevelled edge, the exterior of which is under-cut and slightly beaked. It has sloping shoulders and seems to have a globular body. (Fig. 4, No. 8).

2. Rim fragment of burnished, black vessel, with a crackled surface and everted, bevelled edge, and sloping shoulders towards a rounded body. (Fig. 4, No. 9).

3. Fragment of a solid knob of a lid of black ware, with conical top and a groove. (Fig. 4, No. 7). cf. Br. Fig. 25. T. 102. p. 234.

Black-and-red ware : This pottery of the magalithic variety is also found in plenty. The principal type is the bowl with convex sides and a flat base.

Besides black-and-red ware, russet-coated painted ware and red slipped ware, similar in description to those at Hallur, were also found in the Site.

BEADS. Two beads, one of terracotta, arecanut in shape and the other of carnelian–long, bicone and triangular–are also found.

MADAPUR[13] :

(lat. 14′ 46′ E : long 75° 38′ N : 1 inch to 1 mile map 48 N/9).

This is a deserted village situated in Ranibennur taluka, about 5 miles west of Hadarageri. The chalcolithic site was located in a cultivated land, about a mile and a half to the north, on the right bank of a nullah which is a feeder to the Tungabhadrā. Following antiquities were collected from the site :

NEOLITH : One pointed, butt fragment of a polished stone axe was found.

POTTERY : Both coarse and burnished varieties of the grey ware were found. The chief type is the urn with flaring sides, concave neck and a globular body. Bowls are also found. A fragment of a lid, the conical knob portion of a coarse grey variety is found. (P.1 II. No. 4).

Jorwe Ware : This ware is represented by only one sherd with paintings in black on red surface, with the design of horizontal band, below which are vertical lines.

Besides these *russet coated ware, black-and-red* ware and the *red-slipped ware* sherds are also found.

KUNBEV[14]

(Lat. 14° 40′ E : Long 75° 35′ N : 1 inch to 1 mile map 48 N/10).

This village is situated on the banks of a small nullah about 7 miles south-west of Hadargeri. The chalcolithic site is situated to the east of the village, in the cultivated land bearing survey nos. 66, 67, 68 & 69 extending in an area of about 6 acres of land. But pottery is more profuse in S. no. 68. The following antiquities were collected from the site :

POTTERY : The pottery collected can be classified as follows :—

White Painted Black-and-red ware : only a few sherds of this ware were found. They have a burnished black interior and black-and-red exterior. They are painted in white with vertical and oblique lines. The types are the tulip shaped shallow bowls and conoids. The paintings are very faint.

1) The tulip shaped shallow bowl, with the burnished black interior and red exterior having an everted flat edge and carination on the exterior. It is painted in white in the interior with the design of groups 8 vertical lines, (Fig. 3, No. 1). Similar type is found in Hallur also. (Fig. 3, No. 2); analogies in shape come from Brahmagiri. Fig. 14, P. 11, 11a, 11b 11c, in megalithic ware; Sanganakallu. T. I b, p. 12b; Maski : Figs. 17; (ii) 8 & 9; 18 b (iii), 5a & 5b.

2) Burnished fragment of the lower portion of a conoid with burnt black thin section. The exterior is painted in white with 3 oblique strokes. (Fig. 3, No. 7). Similar type is found in Hallur also. (Fig. 3, No. 6); cf. Br. figs. 24, 98 & 99.

All Black ware : A few sherds, with highly burnished surface of this ware were also found. The types are illustrated.

13 *I.A.R.*, 1959-60, p. 38.

14 *I.A.R.*, 1958-59, p. 332.

1. Fragment of a small vessel with an out-turned everted rim, concave neck and a weak carination below the shoulder. (fig. 4, No. 10).

2) Fragment of a bowl with an out-turned rim, a carinated shoulder and elongated sides, tapering to, presumably, a round base. (Fig. 4, No. 12); cf. MSK. fig. 21, T. b (v) 3, p 62: fig. 22, T. 14, p. 66.

Black-and-red ware: some quantity of this ware was also found. The following types are illustrated :

1) Fragment of a small vessel with out-turned rim, having a ledge on the exterior; concave neck and sloping shoulder, with weak carination. (Fig. 5, No. 9).

2) Fragment of a small vessel, with out-turned, slightly thickened rim, concave neck and sloping shoulder, with a weak carination. (Fig. 5 no. 10).

cf. Maski. fig. 22, T. 18, p. 66.

Sanganakallu. pl. V, T. 1, p.13.

Besides these, *russet-coated painted ware*, *black-and-red ware* and *red-slipped ware*, all of early historic period, were also found.

BEADS : Two terracotta, arecanut shaped beads were also found.

NIRALGI :

(Lat. 14° 56′ E : Long. 75° 39′ N : 1 mile to 1 inch map. 48 N/9)

This village is situated on the left bank of the river Varadā, in Haveri taluka. The ancient mound, locally called 'Kote', is situated to the south of the village, on the left bank of the river. It is much destroyed by earth-grabbers. The following antiquities were collected from the site.

NEOLITH : (1) An axe, plano-convex in section, with a pointed butt and a polished working edge which is blunted.

2. A discoid, probably a re-used tool, the working edge of which is made sharp by alternative flaking. One of the sides is bevelled. It has a polished surface.

POTTERY :

Grey Ware : This ware has a grey, burnished surface and a coarse, gritty core. The chief types are the troughs, globular vessels with thick beaded rims, and bowls with short flaring sides.

Black-and-red ware, *russet coated painted ware* and *red-slipped ware*–all of early historic period are the other varieties found in the site.

BEAD : A terracotta bead, arecanut in shape was also found.

BATTUR[15] :

(lat. 15° 10′ E : Long. 75° 31′ N : 1 inch to 1 mile map 48/M/12)

This village is situated on the bank of the Doddahalla nalluh, in the Shira-

15 *I.A.R.*, 1961-62, p. 51 (Cyclostyled copy.)

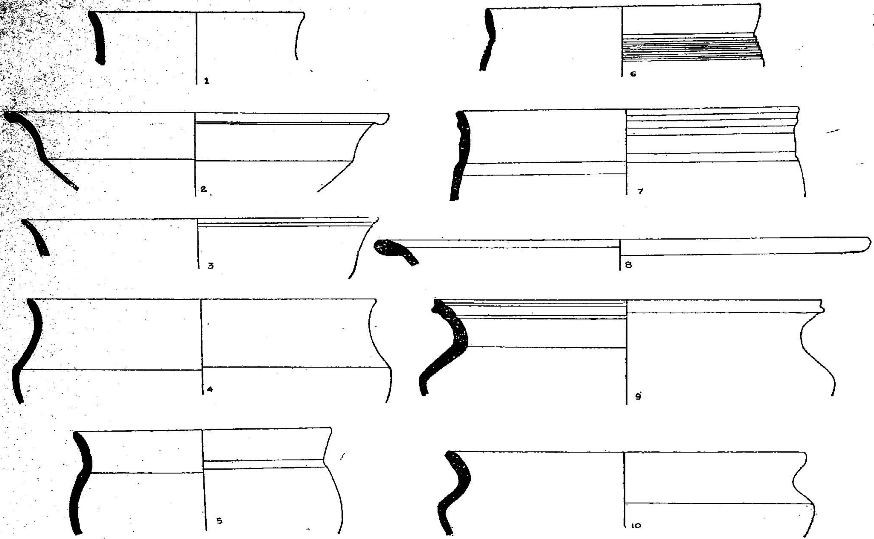


Fig. 5. Nos. 1–3 from Hallur; 4–8 from Hadarageri; 9 & 10 form Kunbev.

hatti taluka. The chalcolithic site is located in survey no. 37, extending in an area of about 4 acres.

POTTERY :

Grey Ware : Only a few sherds of this ware were found. They are rims of urns, with flaring out sides.

The other wares found are the *russet-coated painted ware, black-and-red ware, red-slipped ware*–all of the early historic period.

BEAD : A terracotta, areacanut shaped bead was also found.

In this connection mention must of made of two more sites. They are Fatehpur[16] (1 inch map. 48 N/11), and Hosritti[17] on the Varadā, in Haveri taluka, for the important, though stray, antiquities they have yielded. The former site is situated on the left bank of the river Tungabhadrā. Two important antiquities along with pottery of early historic period, were found in the site situated to the north of the village. They are :

(i) Neolith : a small axe of trap, ovoid in section with a pointed butt, sharp and well-polished working edge, a corner of which is multilated (Pl. I, Fig. 3).

(ii) A fluted core of chalcedony, white in colour and having good flutings as a result of the removal of flakes.

The latter site, Hosritti, (1 inch to 1 mile map 48 N/9) is situated on the right bank of the river Varadā. This has a site ascribable to the early historical period. The most interesting find is a very fine fluted core of reddish brown jasper, with double platforms, showing very good flutings as a result of removal of ribbon flakes. (Pl. I, No. 7).

Of all the chalcolithic sites discovered in the district and described above, those at Hadarageri Hallur, and Kunbev deserve special consideration, on account of the occurrence of the painted *black-on-red* pottery at the former site and the *white painted black-and-red* pottery at the latter two places. It is also necessary to mention here, that polished stone axes have been found in considerably large numbers, while microliths are conspicuous by their absence in these sites. Further, the occurrence at Hadarageri of the *light red* and *cream slipped ware, painted in black with designs* is very significant. This ware, which is an important ceramic industry of the chalcolithic sites of Central India, is found in association with another *black-on-red painted pottery*, generally, called the *Jorwe ware*, named after its type site. It is, therefore, noteworthy that both these wares are found at Hadarageri while, nowhere in north Karnatak has the *cream slipped ware* been found so far while at Maski and Brahmagiri a few sherds, similar to *Jorwe ware* were found Mention must also be made here of yet another painted carinated pot from Maski, which is similar to the one which is very common in *Jorwe ware*. Again still further down south, at T. Narsipur, on the river Kaveri, has been found a few

16 *I.A.R.*, 1959-60, p. 30

17 *I.A.R.*, 1958-59, p. 32.

sherds of *Jorwe fabric.*[18] In the light of these discoveries, occurrence of the *Jorwe and Malwa ware* so far down south as Hadageri, do point to a contact between the chalcolithic cultures of Central India and northern Deccan with those of northern Karnatak.

Amongst the antiquities from Hallur, the most important is the *white painted black-and-red ware.* The *black-and-red* colour of this ware is the result of the technique of inverted firing.[19] This technique has a hoary antiquity. It was known to the neolithic potters of Egypt, where it is found, at the neolithic sites of Fayum and Badari etc., and is designated *the Black-topped ware.* In Egypt, this pottery is ascribed to *circa* 5th millennium B. C. In India, this ware is called *the black-and-red ware* and has so far been reported in the Harappan levels at Lothal, the sub-Indus levels at Rupar and the chalcolithic levels at Rangapur[20]. It, therefore, continues from the late Harappan times to the early historic period. It has a very wide distribution occurring at Rupar in the north, sites in Kathiawad and Gujarat in the west, Rajar-Dhipi in Bengal, in the east and in the well known megalithic sites of the farther south. With the megalithic folk, it became the principal ceramic industry. So far as the chalcolithic period is concerned, this ware has been reported from Gilund and Ahar in Rajasthan, Nagda and Navda-toli in Central India and Prakashe, Bahal (Tekawada), Diamabad and Chandoli in Maharashtra[21]. But the *white painted black-and-red ware* is confined only to a few sites, such as Gilund, Ahar, Nagda, Navda-toli, Prakashe and Tekawada-Bahal (See map B). The *painted black-and-red ware* has not so far been found in the Southern peninsular region. And, therefore, its occurrence in considerable quantity at Hallur and Kunbev, in association with the other elements of the chalcolithic culture, viz., the *grey ware* and polished stone axes, is indicative of yet another link of the chalcolithic cultures of Southern Deccan and those already described. The affinity in shapes (Fig. 3, No. 3) and the similitude with the painted patterns (Fig. 3, No. 5) already noted also support the assumption of intercourse between these cultures. Among the shapes of pottery from Hallur, and Kunbev, the tulip-shaped bowl (Fig. 3, No. 142) and the conoid (Fig. 3, Nos. 6-7.) deserve special consideration. These shapes are of frequent occurrence in the burial furniture,

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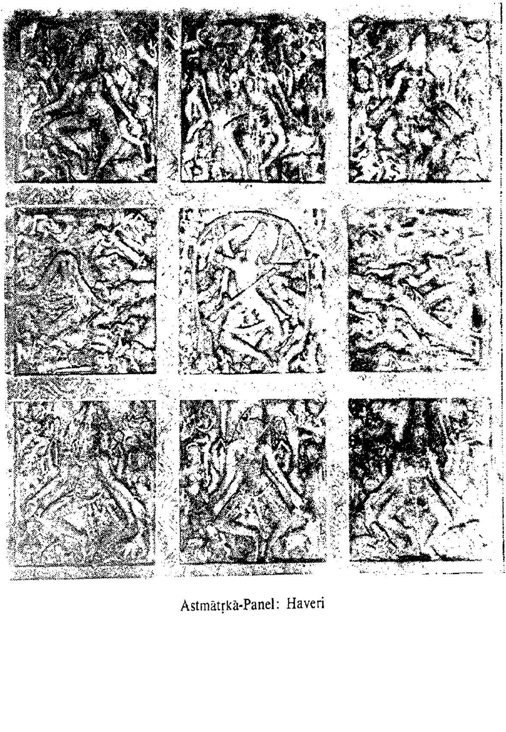
18 *I.A.R.*, 1959-60, p. 38 & 1961-62, pp. 52-53. (Cyclostyled Copy.) Recently the writer visited the site at T. Narsipur and collected the pottery, including the painted variety. The painted pottery is not similar to Jorwe ware. Instead it can well be compared to the painted pottery, from Brahmagiri, Sangankallu, and Piklihal. The ware is very thick and coarse in section. The only feature that can be compared with Jorwe ware is the paintings.

19 It may be noted that this so-called black-and-red ware does not uniformly possess red colour on the vessels. The colour varies from grey, buff, pink and light red, depending upon the conditions of firing and the qualities of the local clay. Yet, for all practical purposes, it might be called by the name black-and-red ware, as it implies only the use of the technique of inverted firing.

20 DIKSHIT, M. G., *B.D.C.R.I.*, XI, 'Excavations at Rangpur.'

The ware is also represented by a single sherd, at Kumshi, on the Bhima, in Sindgi taluka of Bijapur district and recently at Songaon (both chalcolithic sites), situated at the cofluence of the rivers Karha and Nira in Poona district. The writer is thankful to Shri A. SUNDARA, Archaeological Survey of India and Shri INAMDAR, Curator of Museum, Aundh, respectively for the information. The latter was kind enough to show the sherd when he was in Poona.



Astmātṛkā-Panel: Haveri

that is found in the megalithic tombs. But it should be noted that in the later period, i.e., the megalithic, they are devoid of any paintings and are severely plain. The only examples of painted designs, on *black-and-red ware*, supposed to be of megalithic phase, are the sherds exhibited in the Madras Museum, from Perumbair and Madura, reported by SUBBA RAO[22]. Yet it cannot be said that the tradition of decorating the pots with white paintings did not find favour with the people of early historic period. For, paintings in white are to be noticed in the pottery known as the *russet-coated painted ware*. It is also essentially a *black-and-red pottery* produced by the technique of inverted firing, but decorated with paintings with some white substance, which is probably kaolin and is covered with a thin film of russet, a glue like substance, in order to preserve the painted patterns.

Thus, the foregoing analysis points out the survival of a few *black-and-red ware* shapes into the megalithic and the tradition of *painted black-and-red ware* in the *russet-coated ware* of the early historic period. Therefore, it may be surmised that the megalithic culture need not be taken to have been far removed from the earlier chalcolithic cultures, as the survival of the shapes in pottery suggests. On the other hand, a cautious suggestion, that the later megalithic culture picked up and assimilated some of the earlier traditions, might not be out of place, in the light of the evidences on hand; "The occurrence of urn burials and very limitedly, full extension burials, the use of lime as a preservative or a conventional relic, the occurrence of the characteristic *black-and-red ware* and the *black-slipped ware* though shorn of their decorative painted designs and to an extent, a similarity in incised graffitti[23]". In this connection, it may be recalled that the date of megaliths in south India has undergone a considerable revision. It has now been suggested that their date can go as far back as B. C. 700[24], while it is now well known that the chalcolithic cultures survived till the first quarter of the first millennium B.C. If this chronological arrangement could be substantiated by stratigraphic evidence, the survival of the chalcolithic traditions needs no further explanation. For this purpose, Hallur is a very promising site[25].

In the end, it is very necessary to remember that the antiquities described above, were collected during a surface exploration. They have proved to be of sufficient importance, as they throw fresh light on the contacts between the contemporary chalcolithic cultures on the one hand and their relationship with the succeeding megalithic culture on the other. It may not, therefore, be out of place to stress here the need for a systematic excavation of the ancient mounds at Hadarageri and Hallur. There is little doubt that such a venture would definitely contribute towards the solutions of some of the vexing problems in the archaeology of the Peninsula.

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22 Subbarao, B., *Personality of India* (1958), p. 176, fig. 43.

23 Banerji, *Summaries of Papers* read before the International Conference on Asian Archaeology, p. 26, see also, Lal, B B., *Ancient India*, No. 16, p. 22.

24 Banerji, N. R., *Ibid.*, p. 28.

25 It may be noted here that about 3 miles north of the mound at Hallur, there are more than a hundred megalithic circles on the slopes of the hillock of Bhairavanapada.

THE AṢṬAMĀTṚKĀS FROM HAVERI

by
M. S. NAGARAJA RAO

Haveri (dist. Dharwar, Mysore state), also called Nalapuri in the epigraphs,[1] is one of the oldest *Agrahāras* in Karnatak. The earliest mention of the place is made in an inscription of the Rāṣṭrakūta king Kṛṣṇa.[2] It has a number of architectural and sculptural remains datable to the Later Cālukyan period. Of these, the temple of Siddheśvara, an ornate structure, situated on the eastern outskirts of the place, is rich in sculptures and epigraphs. The most notable among the sculptures is the panel of Aṣṭamātṛkās in the ceiling of the sabhāmaṇṭapa of the temple (Pl. I). It is carved on a block of stone measuring 9′ × 9′, in bold relief and covers the south-eastern square of the ceiling of the sabhāmaṇṭapa, which is divided into nine squares, each of which is decorated with a lotus medallion.

This square in which the panel is carved is further divided into nine compartments divided by bands which are decorated with floral designs. In each compartment is carved a mātṛkā in bold relief, the central compartment having Śiva in the form of Gajāsurasaṁhāramūrti. The panel is unique in the sense that it has no parallel, though a similar panel, but with Mahākālī in the centre and Gaṇeśa in one of the compartments, is reported from a small temple near the Gokak Falls in the Belgaum district.[3]

Before describing the panel in detail, it is worthwhile to note some of the general features. All the deities are in dancing postures, in the *atibhaṅga* unlike the usual seated posture. They are all attended by cauri bearers on sides and two musicians at the left hand corner below playing upon some instrument or other. The vāhanas of the deities are invariably carved at the right hand bottom corners. There are flying vidyādharas at the top corners in all the panels except in the case of Brāhmī and Cāmuṇḍā, carrying garlands of flowers save the two in the Vaiṣṇavī panel wherein they are playing upon the viṇā. In the Brāhmī panel they carry the chatra and the khaḍga, the significance of which is not certain. In the case of Cāmuṇḍa, the attendants are hideous-looking and ferocious—which betrays their abode, the nether world.

We shall now study the panel in detail. The deities are described clockwise commencing with Brāhmī, who occupies the top left corner compartment.

Brāhmī is depicted as having three heads decorated with tiered kirīṭamukuṭas, richly ornamented with necklaces, bracelets and other ornaments. She has four arms, the upper right and left hands, holding śakti and the sruva (ladle) respectively, while the lower ones have the akṣamālā and the kamaṇḍalu. Her paraphernalia

1. *ARSIE*, 1932-33, Appendix D, No. 102.
2. *Ibid.* No. 101.
3. Cousens, H., *Chalukyan Architecture*, p. 86.

include the cauri bearers; flying vidyādharas; two musicians playing upon the drum and the cymbals; and the vāhana, goose, with its head turned towards its back.

Māheśvarī, who is found next, is decorated with the jaṭāmukuṭa with the hair falling on the nape. In her four hands she holds the ḍamaru and the śūla in the upper right and left, while the lower two are in the varada and abhaya mudrā respectively. All the other attendants are present as already noted. The humped Nandi is standing majestically at the right bottom corner.

In the next compartment is another Mātṛkā, about the identification of whom we shall speak presently. She is also decorated with the jaṭāmukuṭa. She has four hands, the upper right and left of which hold the khaḍga and kheṭaka (?) respectively, and the lower right and left have a shield and the Danta respectively[4]. The flying Gandharvas and the cauri bearers are also present. One of the musicians is playing on the flute and has a fine headdress with a peacock plume above. At the bottom right corner is a human figure seated in the Vīrāsana.

Cāmuṇḍā is found in the next compartment. She is depicted with an emaciated body with pendant breasts, sunken eyes and a terrific face with a grin.[5] She is decorated with a conical jaṭāmukuṭa and wears a Ruṇḍamālā in the yajñopavīta fashion. She has four hands. The top right and left hold the dagger and the Pānapātra while the lower ones have the Damaru and a severed head held by the hair respectively. She is dancing cross-legged on a dead body. Above the attendant standing to her left, is standing what looks like a dog. At the top right are standing two figures with Pānapātra in their hands. The figures at the top left are two, one whose head is horned is holding a musala (?), the other a dagger; while in between is again an animal which is indistinct. The nude dwarf, 'Kubja', at the bottom left is having an agitated face. The one at the bottom right is playing on ḍamaru. The dog near the latter is attacking the head of the dead body. The whole composition is frightful and of direct appeal which creates fear at the very sight of it.

Next in succession is Indrāṇī. She is also decorated with a conical jaṭāmukuṭa and holds in the top right and left hands, the vajra and the aṅkuśa respectively, while the bottom right and left are in the varada mudrā. The other attendants are also there. The musical instruments played upon are the mṛdaṅga and the tālas. At the bottom right is Airāvata, her vāhana.

The deity who occupies the next compartment could easily be identified as Vārāhī by the very head of the boar with which she is represented. She has a karaṇḍamukuṭa and behind her head is a conical spread, probably the halo. She has four arms and holds in the top right and left hands the daṇḍa or the hala and pāśa respectively, while the bottom right has the akṣamālā and the bottom left in the siṁhamukha mudrā. Her retinue consists of the cauri bearers, gandharvas and the musicians and the vāhana, the elephant, in the bottom right corner.

4. The attributes of the upper left and lower right hands are indistinct.

5. According to *the Visnudharmottara*, see Rao; T. A. G., *Elements of Hindu Iconography*, Vol. I, Pt. 2, p. 386.

Vārāhī is followed by Kaumārī. Only three of the six heads of this deity are seen, since the sculpture is carved in relief. She is decorated with a kirīṭa-mukuṭa like Brāhmī. In the top right and left of the four hands, she holds the aṅkuśa and the pāśa respectively, while the lower right and left hands are in varada and simhamukha mudrās respectively. The gandharvas, the cauri bearers and the musicians are all present. Her vāhana, the peacock, with a plume on the head, is seen at the right hand bottom corner.

The last of the goddesses in this panel, Vaiṣṇavī, occupies the next compartment. She is decorated with the karaṇḍamukuṭa. In her top right and left and the bottom right hands, she holds the cakra, the śaṅkha and the gadā respectively, while the lower left is in the *gajahasta* mudrā. The two female cauri bearers are found on sides, while the gandharvas are found at the top corners, playing upon viṇās as already mentioned. At the bottom left are the musicians. Her vāhana, garuḍa in human form, is seated in the vīrāsana with his hands folded in añjali mudrā. His wings, on the shoulders, are prominently seen.

Surrounded by all these goddesses is Śiva in the central compartment in the form of Gajāsurasamhāramūrti. Unfortunately the face of the Lord is slightly mutilated. He has the jaṭāmukuṭa on his head. He has torn open the demon, Nīla, who attacked him in the form of an elephant, and is holding the skin of the animal in the top two of the eight pairs of hands, in such a way that it should cover his head above. The other pairs of hands hold from the top the khaḍga and the shield, the dagger and the bow (or the skin of the elephant), the triśūla and the akṣamālā, two hands playing upon viṇā, the danta and the pānapātra, the vajra and the kheṭaka, and the ḍamaru and the ghaṇṭā. Besides other ornaments, he has an ūrubandha. The skin of the elephant is terminated by the head of the elephant at the right, and by the hind legs at the left. The trunk of the animal is clearly seen at the right.

Like Cāmuṇḍā, the Lord is cross-legged and is in a dancing posture. At the top corners are seen Viṣṇu and Brahmā, who have specially come for the occasion on their vāhanas. Only three of the four heads of Brahmā are seen, the fourth being unseen as the carving is done in relief. Both the gods are holding their respective attributes in their top pairs of hands, while the lower pairs are in the añjali mudrā.

At the bottom left is Gaṇeśa in a dancing posture, while on the opposite corner is Kumāra on his vāhana, the peacock. On the sides of the Lord are Indra, Agni, Yama, Varuṇa, Vāyu or Nirṛti and Kubera, all of whom could be identified by their respective vāhanas, while the other two are not depicted, probably for want of space.

The whole composition depicts the theme of the extinction of the great Asura Nīla, an associate of Andhaka, who attacked the Lord in the form of an elephant, and who was killed by the Lord Śiva, who made the skin of the animal his garment. It represents the Lord dancing in ecstasy after the event, while all the Mātṛkās who came to help in the encounter are also rejoicing by way of dancing.

In the panel under study, all the goddesses except the third one described above, could be identified with the help of their respective vāhanas and the attributes. But the third goddess, as already described, holds the khaḍga, and the kheṭaka (?) in the upper right and left respectively, and the shield (?) and the danta in the bottom right and left. Except the khaḍga and the danta, the other attributes are indistinct. At the corner, where the vāhana is depicted in all the panels, is a human figure seated in the vīrāsana. These features make it very difficult to identify the deity. For, no Mātṛkā is shown having these attributes, particularly, a human being as vāhana. Secondly, generally only the Saptamātṛkās are depicted in the region to which the panel belongs. But according to the *Varāhapurāṇa*[6], the Mātṛkās are eight in number, the eighth being Yogeśvarī. But Yogeśvarī is supposed to have ten arms, three eyes and carry the śakti, the khaḍga and the ḍamaru in the three of her right hands, ghaṇṭā, the kheṭaka, the khaṭvāṅga and the triśūla in the four of her left hands, while nothing is known of her other hands.[7] Even making allowance for the supposition that for the sake of uniformity, the deity is depicted with only four hands, it is difficult to reconcile the attributes held by her with those prescribed in the canonical texts. Further, the vāhana is a human being. The deities having a human being as vāhana are Kubera and Nirṛti. But then, we cannot account for the khaḍga and the danta in the hands of our deity, should we identify her as the ' Kauberī ', the counter part of Kubera; for, the latter is never associated with khaḍga and danta. Nor can we identify her as Nirṛti as nowhere in the whole range of iconographical texts, has the latter been considered as one of the Aṣṭamātṛkās. Neither could we identify her as Mahālakṣmī, also supposed to be one of the Aṣṭamātṛkās according to the *Īśānaśivagurudevapaddhati*[8]. The only probability, therefore, would be to identify her as Yogeśvarī tentatively, until further evidence is forthcoming. This also obviates the contention of Cousens, who identifies the panel as that of the Saptamātṛkās with Brāhmī repeated twice in order to fill up the space.[9] For , no other deity in the panel, except Brāhmī, possesses any of the attributes and the vāhana associated with Brāhmī.

A word is needed regarding the central figure, the Gajāsurasmhāramūrti. Cousens has wrongly identified it as Bhairava.[10] But a look at the figure is quite sufficient to show that it is Śiva in the form of Gajāsurasaṁhāramūrti.

Though, in general, the representation conforms to the canons of iconography, there are certain departures which are quite striking. Generally, the Mātṛkās are shown in the seated postures, whereas in the panel under study, they are all in a dancing posture, which can be accounted for in that that they are all

6. *Ibid.* p. 381.
7. *Ibid.*, p. 365.
8. *Isanasivagurudevapaddhati*, I. 52.79b, ed. T. Ganapati Sastri, Anantasayana Granthavali, Vol. 72, Trivandrum, 1921; It may be mentioned here that Astamatrkas are common in the Vagmati Valley of Nepal; see P. R. Sharma, *The Archaeology of Nepal*, p. 272, Ph. D. thesis submitted to the University of Poona, 1963 (Deccan College Library).
9. Cousens, H., *Op.cit.*, p. 86.
10. *Ibid.*

rejoicing at the triumph of the Lord over the Asura, Nīla. Secondly, they are always flanked by Vīrabhadra and Ganeśa. But here, Śiva, as Gajāsurasaṁhāramūrti is the principal figure, while Gaṇeśa is replaced by an extra goddess.

The panel could easily be dated to the Later Cālukyan period, since it forms part and parcel of the ceiling of the temple to which it belongs. The earliest reference to this Siddheśavara temple is found in an epigraph of A. D. 1109[11] belonging to the reign of Cālukya Vikramāditya VI, in which certain grants to this temple are, registered. This proves the construction of the temple before A. D. 1109, and along with it, the panel in question. Hence, the panel could safely be dated to the 11th century A. D.

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11. *ARSIE*, 1932-33, Appendix D. No. 80.

CASTE, LEADERSHIP AND GROUP DYNAMICS

A Case Study[1]

by

R. K. MUTATKAR

The study of the pattern of group formation in rural India has been found more useful recently. For the proper functioning of democracy in India, and in order to make it more effective and efficient, it is necessary to understand the patterns of group formation, leadership and decision-making.

The structure and organization of an Indian village community is determined by the interplay of solidarities provided by caste, kinship and territorial affinities. Groups of individuals, families, lineages and castes form temporary or permanent units for performing various activities in a village. The term 'faction' has been used to denote one such unit or group. Faction is not a permanent feature of social structure. It fits in the concept of social organization as developed by FIRTH (FIRTH : 1951), for it functions as a specific group toward certain ends but never attains permanency in social life. Factions are social alignments between various individuals, different families, lineages or castes having some common aims.

Social groups in India, especially in village India, are highly structured. The structured groups like caste and joint family perform the traditional functions. Village panchayat and the village-elders also contribute toward ordering of village life. But, all the individual and group differences are not resolved and channelised by these agencies. Factions try to canalise such temporary differences. Factions definitely mean marked cleavages in traditionally formed groups. The reasons of faction formation may be varied. They may arise due to differences in opinions at group or individual level. But the cleavages though originating due to personal factors attain social values.

The nature and functions of faction formation have changed recently due to increased developmental activities at the village-level. The abolition of zamindari, creation of statutory elective village panchayats and the launching of community projects have changed the pattern of group formation. Before Independence, the different groups which form the permanent units of social structure, used to function socially as units. Decisions were taken by heads of the families, lineage and caste elders, and by village elders depending upon the levels of decisions involved. Faction formation was also on caste or kinship lines. Family, kingroup or caste moved as units in group-alignments in village or inter-village cleavages. It is proposed to find out in this paper, in what way the changes in group alignments have taken

[1] This study is based on field work done by the author in 1958-59.

shape after Independence and zamindari abolition. The problem has been examined with reference to a small ex-feudal village, where two dominant castes of the old feudal order are trying to adapt themselves to the changed circumstances.

Jaurasi, a small village with a population of 538 people is situated at a distance of eleven miles from Gwalior in Madhya Pradesh. The village is connected with Gwalior by an all weather road and lies on the bus route. At a distance of two miles from the village is a railway station, and an Extension Training Centre for training the VLWs.

The population of the village is distributed among 15 castes. The village is dominated by the two groups of Thakurs, the Kirars and the Kamarias.

Table No. 1[2]

Distribution of population according to castes

S. No.	Name of Caste	No. of Families	Population	Percentage in village Population
1.	Kirar	20	114	21·13
2.	Kamaria	16	93	17·54
3.	Koli (weaver)	13	62	11·50
4.	Chamar (leather-worker) ...	10	62	11·50
5.	Kachhi (vegetable-grower) ...	9	50	9·43
6.	Nath (snake-charmer) ...	12	44	8·30
7.	Gadaria (shepherd) ...	4	39	7·35
8.	Other (eight single-family castes)	9	74	13·93
	Total 15 Castes ...	93	538	about 100

Other single family castes include Brahman, Gosai (Sanyasi Baba) Bania (Merchant), Badhai (Carpenter), Nai (Barber), Kadera (Cotton-cleaner), Dhobi (Washerman) and Sehria (Tribals). There is one Punjabi famly living at a distance of one mile from the village.

The Kirars and the Kamarias are traditionally agriculturists. Now, other castes are also following agriculture.

Table No. 2[3]

Distribution of land in the village

S. No.	Name of Caste	Landowned (in acres)	P. C. in village land	Revenue paid	P. C. in village revenue
1.	Kirar	260	31·51	Rs. 620	35·42
2.	Kamaria	150	18·18	Rs. 445	25·42
3.	Other castes	215	26·06	Rs. 430	24·57
4.	Punjabi family	200	24·24	Rs. 260	14·85
	15 castes and one Punjabi family	825	99·99	Rs. 1755	about 100

[2] Census collected by the author

[3] Taken from revenue records.

The Kirars have recently acquired more land in another village which is three miles from Jaurasi. The Kirars and the Kamarias were zamindars of the village at the end of the 19th century, each sharing it equally, that is, each of them having a share of eight annas. About 40 years ago, the Kirars sold 5½ As. share to a Maratha noble of Gwalior. After 20 years again, they were forced to sell out the remaining 2½ As. share of zamindari to another nobleman of Gwalior. The Kamarias, on the other hand, retained zamindari rights till its abolition in 1951, and were later compensated. The Kamarias due to posessing the zamindari rights, did not care to acquire more land, as the Kirars did.

The traditional jajmani system was functioning in Jaurasi till the dawn of Independence. After Independence and especially after zamindari abolition, about all the lower castes gave up their traditional occupations and are now following agriculture. The interdependence of various castes has now declined and the villagers have to get the work done either in the city or in some other big villages in the neighbourhood.

Next in importance to the legislation regarding zamindari abolition, came the statutory panchayats and the community project, which in combination helped to alter the village scene.

II

There has always been a tussle for power among the Kirars and the Kamarias. It originates from the discussion about the origins of the two castes. The Kirars trace their ancestry to the Kauravas and Pandvas while the Kamarias relate themselves to Yadav-vamsh in Krishna-avtar. The Kamrias, however, relate the Kirars to kirats— the tribals as described in Ramayana; while the Kirars refer Kamarias as the product of a Gadaria male and a Yaduvanshi Rajput female. In fact, both the groups, which are endogamous, do not appear to be the real Thakurs but Sanskritized ones. For, as against the practices of the pure Thakurs of Bhind and Morena districts in Madhya Pradesh, the Kirars and the Kamarias are endogamous and their womenfolk work in the fields. However, for practical purposes, we may regard them as the Thakurs, in the absence of real Thakurs in the village. They are respected by low caste people as Thakurs and are formally recognized as such.

The enimical relationship between the Kirars and the Kamarias is not limited to such petty squabbles. The Kamarias played a significant role in the process in which the Kirars lost major share of their zamindari rights. About forty years ago, due to bad crops, Kirars could not pay land-revenue to the government. Under normal conditions, the matter would have been settled. But, the then Kamaria zamindar took a vow to oust the Kirars from the village. He used his influence and got a decree issued for the auction of zamindari rights held by the Kirars. The Kirars, out of desperation, sold the rights of 5½ As. share to a Maratha noble of Gwalior who became absentee landlord and was later compensated by the State, after zamindari abolition. In open auction, the Kamaria would have purchased the rights, to the humiliation of the Kirars. The other share fell to the lot

of an old widow. Since, other Kirar agriculturists did not pay the land-revenue for three four years in continuation, she sold out the zamindari rights to another Maratha noble of Gwalior, about twenty years ago. Thus, the Kirars became ordinary cultivators due to inter-caste and intra-caste factors.

There is a marked difference between the village before zamindari abolition and after it. Before the abolition of zamindari, the Kamarias dominated the village scene. However, since the Kirars collected revenue on behalf of the Maratha nobles, they were also respected by the lower castes, being *de facto* zamindars. But, the people never feared the Kirars as much as they did the Kamarias, who continued to be the real landlords. The other castes continued to render their services in the traditional pattern of patron-client relationship to the Kirars also, besides serving the Kamarias. Thus, the two higher castes[4] continued to be equally strong, and were getting similar respect from the lower castes.

Leadership of various caste groups in the village vested in the old and well-to-do persons. Bid for individual leadership of the village was less expressed. It was not possible for one person to become an over-all leader of the village in view of equal strength of the two higher castes. Broadly speaking, in the case of ower castes, the composition of the caste has been of the sort of one lineage, one gotra, one caste. Being such closed groups, they functioned as cohesive units. Among the higher castes also, inspite of the recognition of different lingeages, same gotra gave them the feeling of ' actual kins ' and hence, in the traditional setting, the two castes functioned as cohesive units in all socio-economic and religious matters.

The abolition of zamindari followed by the inception of new panchayats and community project began to alter the face of the village, radically. The most important effect of zamindari abolition has been the weakening of the influence of the Kamaria in the village. The Kamarias lost their position of the most dominating group in the village. The lower castes in their relationship with the higher castes always remained closer to the Kirars as against the Kamarias, since the latter were the real landlords while the former were the agents of the Zamindars. In fact, both the groups, the lower castes and the Kirars, were sailing in the same boat, the lower castes trying to rise up and the Kirars trying to adjust to new circumstances, after they lost their zamindari .rights. Thus, after zamindari abolition, the Kamarias have so far remained an isolated group. This fact becomes evident from the structure of the hookah (hubble-bubble) groups in the Kamaria and the Kirar localities. In Kamaria locality, no members of other castes are to be seen sharing the chilim with the Kamarias, while in Kirar locality, somebody from other caste is always present. With zamindari abolition, and introduction of progressive measures, the air of terror and insecurity present in the minds of lower castes receded. The individuals, families and caste groups became free to express their views in different matters. The democratic institutions like the statutory panchayats opened up new avenues for the channelization of these free views.

[4] An endogamous group has been referred as caste and not as sub-caste.

In some contiguous areas, these released forces which are supposed to be canalized by democratic ways and means could not be controlled and the resulting rule of the rod became one of the reasons for the greater incidence of dacoity. Perhaps, the inter-caste tensions in Bhind and Morena districts aggravated due to zamindari abolition have some relationship with the growing dacoity problem. The hypothesis cannot be stated definitely without a good amount of field work in the area.

According to DUBE, the abolition of zamindari " has meant the end of the the domination of one particular caste over all others ". Further, " democratic elections to bodies like the Gaon Sabha (village panchayat) and the Adalati Panchayat (village court), created under the Panchayat Raj Act provided an opportunity for the different groups in the village to come out into the open and press their right to positions of power and authority. The contest in most cases was between castes that have exercised power for a long time and the under-privileged, mostly untouchable, groups". (DUBE : 1958 : 31).

In Jaurasi, the tussle for power is not between the higher castes and the lower castes but is between the two higher castes of equal status who want to gain position by trying to woo the lower groups. This tug of war in the new set-up of panchayats and elections demand new leadership, which has been provided by these castes. The individuals who had (i) relationship with the urban areas and the officials, (ii) could understand legal matters, (iii) could function as a link between villages and the outside world of cities and the administration and (iv) who could devote a substantial part of their time to these activities, at once came up as leaders. Education also played an important part in the rise of new leadership. Traditional leadership is present in the village but its voice is more respected in technical matters like agricultural operations, ceremonial and ritual matters. In matters pertaining to the development of the village or in maintaining relationship with the outside world, the new leaders have their say, which is accepted by others.

The Kamarias had no leaders who could adapt themselves to the new set-up. The only educated man (Hindi 8th standard), of 46 years of age now, became Patel of the village. He is an ex-zamindar. He has much land and there is nobody in his family who could assist him in agricultural operations. However, advice is rendered to other people and as Patel, he is on every committee regarding village matters. A young leader is now emerging among the Kamarias, K. Singh, a well-to-do youth of 30 years of age, having passed Hindi 7th standard. He is a parallel cousin of the Patel, of the first degree. He has been elected one of the two panchs from Jaurasi to represent the village in inter-village statutory panchayat.

Among the Kirars, there are two leaders. PL. is a man of 43 years of age, educated upto Hindi 8th standard. He was a posthumous child and was adopted by his mother's father. He is a congressman and was one of the Directors of the District Co-operative Bank, four years ago. The body of the Board of Directors was dissolved by the District collector on alleged charges of nepotism and corruption. PL. is supposed to have a number of illicit sex relations with many

women in the village. He is a sweet-tongued man and knows polished mannerisms. He is the second panch representing the village. The second Kirar leader is PM., an uneducated man of 50 years of age. He has three brothers, one elder and two younger to him. Jointly they own a Haveli, a strong house constructed so as to provide protection from the dacoits. They also own the Kirar temple. PM., owns the biggest chaupal (a place where many people can assemble, sit on cots smoke and gossip), which is refered to as Bangla by the villagers. PM. has started contract work in ceiling-stones in Gwalior for the last two years. He maintains contact with the pleader who was the main figure in the dissolution of the Board of Directors of the District Co-operative Bank. There are two young Kirar boys who are taking college education in the city, but they have no plans to return to the village after the completion of their education.

The other leaders in the village are Gosai Baba and the chamar elderman, in the sense, that they represented Jaurasi as panch in the first term. Other elderly people in all the castes are consulted in matters like marriage, medicines and agricultural operations.

Table No. 3

Sources of power of the leaders

S. No.	Categories	K. Singh	PL	PM
1.	Caste	Kamaria Thakur	Kirar Thakur	Kirar Thakur
2.	Age	30 years	43 years	50 years
3.	Education	Hindi 7th standard	Hindi 8th standard	Uneducated
4.	Property	7 acres of land; Pakka house.	11 acres of land in Jaurasi; revenue collecting rights for 150 acres rent-free land in other village; Pakka house.	5 acres good land, 50 acres bad land; Share in temple and Haveli. Possesses biggest chaupal called Bangla.
5.	Dependents	Five: wife, three children and mother.	Six : wife, daughter of marriageable age and four sons.	Three : wife, daughter of marriageable age, one son.
6.	Urban contact	Served in Police as constable 7 years ago, goes to Tehsil headquarters to meet officials and to get things done for others, contact as panch.	As director of the bank, Links with political party, goes to Tehsil to do work of the villagers, contact as panch.	Contract work in ceiling stones, contact with pleader, goes to Tehsil.
7.	Affiliations with political party.	Not particularly.	With Congress.	Personal influence of a communist pleader.
8.	Personal Characters	Ambitious to become Sirpanch, village leader, impatient to become leader, son of an ex-zamindar	Ambitious to become sirpanch, Director, etc. Believed to have illicit sex relations, sweet-tonged, always obliging, friend of a peon in collectorate.	Honest, wants his existence to be felt and to be respected, not ambitious
9.	Area of influence	Represents views of young Kamaria	Leader of one group of Kirar, consulted by everybody in the village except by members of PM group.	Leader of one group Kirars, consulted by villagers except by PL group

The new leaders in the village are K. Singh, PL and PM who are consulted by the villagers for non-traditional work. The leaders' sources of power can be put in a tabular form.

This information about the village leaders in the new set up gives us a clue to the formation of groups and their interrelations in the village.

III

The formation of two groups or factions among the Kirars, though traditional in nature is new in character, since other castes played vital roles in forming these groups. The implications of these factions upon the development of the village in the light of new set up are very important.

The formation of two groups among the Kirars started with the purchasing of Bangla by PM, about three or four years back,. The Bangla or the biggest chaupal was constructed by a Maratha noble and was in possession of PM after zamindari abolition. PM had given some nominal sum to the Maratha zamindar but the sale deed was not registered. One Kirar, B. Singh who was formerly a close friend of PM but had broken the friendship due to personal reasons went to Maratha zamindar and offered him bigger price for the bangla. B. Singh had the backing of PL. PM was not on good terms with PL for two reasons. (i) He is temperamentally different from PL and cannot tolerate PL's illicit sex relations, (ii) PL had become the director of the bank by this time and he wanted to become leader of the Kirars and leader of the village. He wanted to be flattered by all to get the loans from the bank. This was not tenable to PM and his friends, and an inner rift formed among the Kirars.

The Maratha noble put bangla to auction and cut the bid at Rs. 300/- for the price had gone too high. The bangla was purchased by PM as a prestige issue. PM was enraged by this unholy alliance of B. Singh and PL which cost him Rs. 300/-. He extended the chabutra-open platform, in the teeth of opposition by PL. By that time, a move against the directors of the bank was brewing at Gwalior. PM joined hands with the opposition and helped to oust PL from directorship. This was the beginning. All the Kirars were not directly implicated in it. They used to eat, drink and smoke together, though internally there was a rift.

Here comes Brahman on the scene. Brahman is 65 years of age and is a pujari of Kirar and Kamaria temples. Forty years ago, since he was spoiling the Kirar temple by living there, he was given a chaupal which was not in use. Four or five years back, the construction made by the Brahman gave way in the rains. The Brahman stealthily sold the plot to a Kirar, Pnd. for Rs. 100/-. About all the Kirars came to know about it after the registration deal was completed. It could be completed so secretly because Pnd's elder brother is a peon in the collectorate. The Kamarias who were watching the situation and who had become weaker after zamindari abolition came forward. Two Kamarias who were formerly zamindars gave evidence about the ownership of chaupal in favour of the Brahman.. No Kirar was present in the collectorate, though PL knew what was happening.

The registry was issued in the name of the peon who rarely visited the village. After the fact became known to all the people, PM group called a Kirar meeting, since the chaupal belonged to all the Kirars of Burane gotra. The Kirar who purchased it is not a Burane by gotra. He comes from the village where PL's mother was married. In the meeting, PL arrived late and charged others for not consulting him in the matter and hence refused co-operation. Moreover, the initiators had to prepare the draft and they were searching the Bania to write it out. They did did not request PL to write it. So he went away. Following his departure, nothing could be decided and the meeting broke up.

Then came the marriage of the daughter of Pnd who had purchased chaupal from the Brahman. Only PM brothers were not invited. Other members of PM group suggested inviting PM also and on refusal, they walked out of the marriage. At this stage, two groups, or Patis, as they call in local language, were formed among the Kirars — a pati headed by PM and another by PL.

There are twenty families of the Kirars in the village, ten in each pati. Out of these twenty families, 17 families belong to the same gotra, Burane, and regard themselves related. There are three lineage groups involved which are cut across by the patis. PM and PL belong to different lineages of the same gotra.

Table No. 4

Structure of patis according to families and lineages

Lineage No.	Families in PL group	Families in PM group
1. (Lineage of PL)	Three	One
2 ...	Two	Four
3 (Lineage of PM)	Three	Four
	Two families of different gotra	One family of different gotra
Total	Ten families	Ten families

Two single family castes, Bania and Badhai, live in Kirar locality and their support is claimed by PM group. There are two cases in which real brothers have joined opposite patis.

After the formation of groups or patis among the Kirars, two marriages were celebrated in PL group and one was celebrated in PM's pati. In these marriages, nobody from other pati, even real brothers were invited. According to OSCAR LEWIS, " The faction is primarily a kinship unit ... ... Membership in a faction is never on an individual basis but on family groups....There is not a single case of brothers belonging to different factions. " (LEWIS : 1954 : 14-15). However, in Jaurasi, PM's elder brother belongs to PL group. All the four brothers live in four adjoining rooms but the eldest and the three younger form separate groups and do not have any communication with each other. They do not even inquire if one is sick. These days, PM has started taking drinking water from the well

from which the low castes draw water because PL and PM do not see eye to eye and have so far spent many rupees in fighting legal battles. In short, the patis have attained such proportions that if anything is proposed by one pati, it is necessarily opposed by the other.

So happened in Badhai's case. Last year in Chait, March-April, after the formation of patis, Badhai was demanding cash from the villagers for the work that he did. PL initiated that the Badhai be boycotted and thus he was boycotted by the village panchayat. PM group did not attend the meeting and yet continue to get their things done from the Badhai.

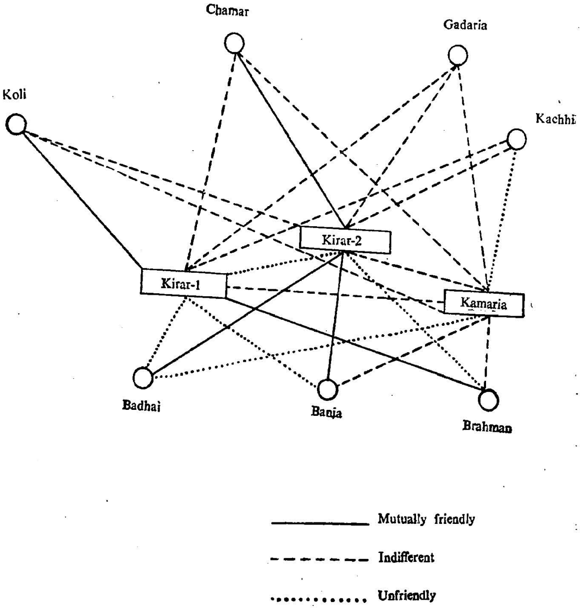
Due to the formation of patis among the Kirars, the most dominant group in the village, two important development works are lying idle. One is laying of a street of block stones in Kirar locality, and the other is construction of the school-building. One work by the Extension Training Centre has been a success to some extent, the distribution of seed in the village under Rabi campaign. This became successful because people had not to contribute anything. Yet, PM and K. Singh remained unsatisfied and did not extend positive co-operation. No development activity can be successfully launched in the village without the full co-operation of both the patis of the Kirars, since the patis have following in other castes.

Other castes in their overt behaviour generally seem neutral toward any group but they have their opinions. The Kolis are in favour of PL, since their leader had a quarrel with an influential old man from PM's pati. There are other reasons also. The Chamar follow PM because PM supported a Chamar at the elections of panchayat. The Gadaria and the Kachhi have to support the Kamaria, being situated near Kamaria locality. Among the Kirars, they prefer PM. Most of the Kamarias now support PM, for PL offers them competition in formal leadership of panchayat or directorship of the bank etc. PM has no objection to PL becoming a panch or a director so long as he would respect him.

These relations can be shown diagramatically by a sociograph.* (See Page 92)

Recent trends in these interrelations are important. It has already been said that one young Kamaria, K. Singh and PL are panchs from village Jaurasi. In the first term, one Chamar was a panch from Jaurasi, representing a seat reserved for the scheduled castes. The other member was Gosai Baba nominated by the Kirars and the Kamarias, in order to avoid quarrel between the two castes. Last April, in the panchayat elections, K. Singh and PL filed nomination papers. PM, on knowing this, took the Chamar and the Gosai Baba to file nomination papers in their names in order to oust PL from the scene. But they reached the office late and PL and K. Singh got elected. Now, the young ambitious Kamaria is in competition with PL for village leadership and as a natural consequence, he has started wooing PM. This story fully supports MENDELBAUM's view about panchayats that "there is some tendency for them to become the battle ground of village factionalism." (MENDELBAUM : 1955 : 17).

* Group affiliations affecting leadership in the village



IV

Summarising and concluding the whole situation, it may be said that there has always been a race for power among the two higher castes of equal status in the village. After zamindari abolition and the starting of village panchayats and the community project, the zamindar caste weakened considerably due to lack of new leadership which could adapt itself to changed circumstances. The other higher caste which could provide leadership to the village and which could gain confidence of other lower castes to a greater degree, being a non-landlord caste, became powerful. But two opposing groups formed in the dominant higher caste, which have been hampering the development activities. Recently, one young

leader of the ex-landlord caste has joined hands with one group of the dominant caste to rise higher on the ladder of new leadership provided by the changed set up. This group supported two persons of other castes, one being of the lower caste, to make a showdown of other group leader belonging to the same gotra and caste. Thus, the impact of the events like zamindari abolition and creation of statutory elective village panchayats, in DUBE's words, "on the general pattern of social relations interpersonal as well as intergroup-has indeed been significant. The emerging alignments and changes in power equations in the village communities have a significant bearing on the problems and prospects of rural community development". (DUBE : 1958 : 143)

Some observations can be made from the analysis of the facts.

In the new set up, leadership pattern has undergone a change. There are two distinct types of leaders in the village now. One set of individuals serve as a link between the village and the outside world, and these are new leaders. The other set of individuals are traditional leaders who are consulted by village people in technical matters like agricultural operations, ceremonial and ritual matters. For a roadside village, situated near a city and forming a unit in Community Project, this pattern of new leadership is more important.

Bid for leadership has changed the nature of group dynamics in the village Groups have ceased to be primarily kinship units and the power equations have changed considerably. In opposing groups, real brothers find place and lineages are cut across by patis. Groups within the caste do not mind aligning with the leaders of lower or higher castes, with whom there was traditional rivalry, for gaining power. In that manner, upper castes in the village have started working as less cohesive units. However, lower castes still move as units. They align with one group or the other as a whole.

Thus, some individuals have attained more importance, families and lineages have left traditional solidarities and higher castes in a certain setting are becoming more mobile, disturbing the traditional equilibrium between these units of social organisation. This disturbance of equilibrium has developed into a complex chess-board. This chess-board of interrelations in Jaurasi being ununderstandable to development officials, this roadside village instead of becoming an ideal village has become a village which is despised by most of them.

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THE ACCENTUATION OF ARYA– IN PĀṆINI AND THE VEDA*

by

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I. The Paninian position :

The word *arya-* is derived from the root *ṛ* (*ṛ gatau*) to which is appended the primary derivational suffix *-yat* (= bound morpheme-*ya*). Normally, the satellite-*ṇyat* (P. 3.1.124) would have been suffixed to the root *ṛ*; but, according to the interpretation of the Pāṇinīyas, the general rule, "*aryaḥ svāmivaiśyayoḥ*" (P. 3.1.103) teaches that the word *arya-* is irregularly formed by suffixing the kṛt satellite-*yat* to √*ṛ* (the nucleus[1] becoming *ar*-as per P. 7.3.84), and the word, thus constructed, carries the sense of 'master (lord),' and a 'vaiśya'[2]. According to the accent rule, "*yato'nāvaḥ*" (P. 6.1.213), the initial phoneme receives the acute accent in árya-. But Kātyāyana (K.) introduces an accentual note by saying that aryá- when conveying the sense of 'master', should always be treated as an oxytone (*svāminy antodāttatvaṃ ca*)[3]. The Phiṭ S. I. 17 runs on similar grounds: "*aryasya svāmyākhyā cet*" which makes *arya-* end-acute, in the sense of 'master'. However, the sūtra, "*yāntasya antyāt pūrvam*" (Phiṭ S. III. 13) stresses the acute in a trisyllabic word ending in *-ya* on the penultimate phoneme.

The firm view of the vārttikakāra is that *arya'-* is an oxytone in the sense of 'master', but as a paroxytone, it (árya-) bears the meaning 'vaiśya'. This is confirmed by Jinendra Buddhi's notes to P. 3.1.103 : "*tatra eka ādyudāttaḥ. aparo ' ntodāttaḥ. ya ādyudattaḥ sa vaiśye nipātyate. itaras tu svāmini iti*[3-a]".

II. The Vedic data :

In the Saṃhitā texts, the oxytone *arya'-* occurs in 61 places; the paroxytone árya- is attested about 8 times and the vocable with the end-phoneme receiving the circumflex (aryâ-) appears in two examples. The paroxytone does not occur in ṚV, TS, AV and SV, while it is recorded mostly in the *Mādhyandina* and the *Kāṇva* recensions of the White YV (with the single exception, however, in Kāṭha.

*In the preparation of this paper, submitted to the International Congress of Orientalists, New Delhi, 1964, I have been benefited by useful discussions with Dr. S. M. Katre (my Research Professor), Prof. K. A. S. Sastri and Dr. S. D. Joshi.

1 The nucleus or kernel is the basic part of a word which expresses the principal concept. The word nucleus, in this paper, indicates *prakṛti* and satellite refers to the *pratyaya*. For a study and an analysis of word-structures into nucleus and satellite, see R. S. Pittmann, *Nuclear Structures in Linguistics*, Lg. 24, 287-92; also see M. D. Pandit, *Pāṇini–a study in non-compounded word-structures*, VIJ I, ii, 226.

2 Renou translates vaiśya : "... le tenant de la 3e classe sociale". See *La grammaire de Pāṇini*, I, 109

3 Bhaṭṭoji (SK 2851) omits this vārttika.

3-a *Nyāsa*, Ed. by N. C. Chakravarti, I. 569

S. 38.5), besides its occurrence traceable to the Brāhmaṇa texts of the *Aitareya* and *Satapatha* Schools. But the oxytone which is widely attested in the Saṃhitā texts, is not recorded in the Brāhmaṇa texts. The number of occurrences of the forms in the Vedic texts [4] is tabulated as under :

vocable	*ṚV*	*VS*	*KS*	*TS*	*Mai.S*	*Kātha. S*	*SV(K)*	*SV(J)*	*AV(S')*
aryá- (1)	29	1	1	3	3	5	1	1	3
árya- (2)	—	3	3	—	1	1	—	—	—
aryâ- (3)	1	—	—	1	—	—	—	—	—

A comparison of the three forms with similar phonemes but with three different distributions in pitch, viz. the high pitch (*udātta*), the low pitch (*anudātta*) and the higher or rising pitch (*svarita*), seems to indicate that the Vedic accent is phonemically contrastive as far as the three above-mentioned grades are concerned. In the oxytone *arya'*- (1), the final sound acquires a high pitch; in the barytone árya- (2), the end-phoneme has a low pitch and in *aryâ*- (3), the phoneme at the final position rises to a pitch higher than the udātta[5]. Thus taking into consideration the present-day traditional recitation of ṚV, it could possibly be seen that between the oxytone *arya'*- (grade 1) and the end-circumflexed aryâ- (grade 3), there is the structural possibility of the phonemic contrast of an udātta segment with the svarita segment at the final positions.[6]

The above view would be justified if we could only accept the verdict of K. that the oxytone should mean 'lord'- a fact supported by the author of the *Nighaṇṭu* 2.6 which renders Ṛg Vedic *arya'*- as *īśvara*-, 'owner, master'. According to Bailey, this meaning of *īśvara*- and *svāmin* suits well in various Ṛg Vedic passages.[7] The word aryâ- (3) is attested with a unique accentuation in ṚV 1.123.1-c[8] where it (aryâ) is used as an epithet of *Uṣas*. Mādhava, in his

[4] VB, *Vaidikapdānukramakoṣa* I, 426-7

[5] I have described the three musical accents here as preserved in the traditional recitation of the Ṛg. Vedic singers in Madras State, South India.

[6] The phonemic contrast is suggested here structurally between aryá- and aryâ-, following the Vedic graphemic system. One can consider here an instance of a secondary phoneme (which is described as a " variation in the utterance of a sound or word, such as difference in tone, pitch or stress or duration " (see *Dictionary of Linguistics*, 192). For this one can rely on K. for his meaning of the paroxytone as 'lord' and on Mādhava who renders the end-circumflexed aryâ as 'giver of riches' or as a vaiśya. But the phonemic contrast cannot be established if, after Grassmann (*Worterbuch zum Rig-Veda*, (1955), 116), one were to read Ṛg Vedic *arya-* as *arya-* ,aría (= aryá). The *Pada-pātha* under RV 1.123.1- creads aryâ. It is in the case of gerundive suffixes that Macdonell has observed that *ya*, which occurs in ṚV about 40 examples and about 60 examples in AV, is nearly always to be read as-*ia*, which accounts for the treatment of final radical vowels before it. (*Vedic Grammar*, GIP, 577-8). Arnold too has suggested that the nominal suffix *-ya* has to be read *-ia* exceptionally after light syllables. (*Vedic Metre*, p. 100).

[7] *Iranian arya- and daha-*, TPS (1959), 84

[8] The passage, " Kṛṣṇád úd asthād aryâ " has been suspected of corrpution by Bergaigne : " Ce mot se recontrerait, au féminin, dans un seul passage, I, 123, 1, qui est peut-être corrompu. (Voir *Religion* Védique, III, p. 287)". See Études *sur le lexique du Rigveda*, 190.

commentary to this passage, takes the word to mean 'giver of riches' (*arthānām dātrī*).[8a] Sāyaṇa simply renders the vocable: '*araṇīyā pūjanīyā*'. GELDNER translates: "Die Herrin ist voller Kraft dem Dunkel entstiegen für den menschlichen Wohnsitz sorgend".[8b] THIEME translates *aryā* in the same passage, '*Die Fremdlingbeschützende* (*Uṣas*).[9] BAILEY takes the word to mean 'possessor of riches'[10] (noble or rich, in the adjectival sense).

We can cite another instance in which the grave segment appears at the final position when contrasted with the circumflex segment at the final position. VS 20·17 (= SB 12.9.2.3)[11] reads árye, whereas TB 2.6.6.2 (= TS 1.8.3.1) records *aryè*. As regards the significance of the word, ROTH and BÖHTLINGK state that "according to Mahīdhara, the meaning of árya-(2) is vaiśya, but it can be seen as having the same sense as Ārya, i.e. a man of the rightful nation, a member of the caste according to the probable contrast between ārya and śūdra".[12] Both Sāyaṇa and Bhaṭṭa Bhāskara have explained *arye* in the above passage as *svāmin* or *vaiśya*[13]- a sense which Pāṇini has already taught for *arya-*.

From the above Vedic data, it seems clear that of the three grades *arya'*- (1) *a'rya-* (2) and aryâ- (3), the position between grades (1) and (2) is different; but between grades (1) and (3), the types are different, the position remaining the same.

III. The attitude of the Vedic commentators:

Sāyaṇa, Uvaṭa, Mahīdhara and Bhaṭṭa Bhāskara have surely kept the evidence furnished by Pāṇini and K. in interpreting the accent and the sense of Vedic aryá-, árya-, aryâ-'. The Pāṇinian influence on the Vedic commentators could be seen in the select Vedic references given below:[14]

8a *Ṛgarthadīpikā* comm. ed. by SARUP, ṚV II, 17

8b *Der Rig-Veda* I, HOS 33, 170

9 *Der Fremdling im Rigveda*, 82

10 BAILEY, *op.cit.*, 104

11 THIEME, *op. cit.*, 95: "Der Vers VS 20.17 erscheint, ausser ŚB 12.9.2.3, auch K. 35.5, TS 1.8.3.1., TB 2.6.6.2. Von den schwarzen Yajus-versionen sind nur die beiden letzt-genannten akzentuiert überliefert. Sie lesen aber nicht, wie VS und ŚB árye sondern *aryè*".

12 PW, 448. "If, according to ROTH, árya- means Aryans (people), then it can easily be inferred that this word later on obtained the general meaning 'master'. But a limitation of the sense to vaiśya is fundamentally unthinkable". THIEME, *op. cit.*, 92.

13 "Yác chūdré yád aryè énaś cakṛmā vayám", TS 1.8.3.1, ed. by A. M. SASTRI & RANGACHARYA, Mysore, (1895), vol. III. p. 115. Cf. Tai Br., vol. II ed. by R. MITRA, Calcutta, (1862), p. 282 and vol. I, p. 684 for Sāyaṇa's commentary. (Bhaṭṭa Bhāskara writes: "*aryaḥ svāmivaiśyayoḥ iti nipātyate, nipātanasāmarthyād* eva abhimatasya siddhiḥ". Sāyaṇa comments (TB): "*aryaḥ svāmī vaiśyo vā.*"

14 The following editions of the Saṃhitā texts have been consulted: Poona edn. for ṚV, Hoshiarpur edn. for AV, Mysore edn. for TS, Bombay edn. for Mādh. Śuk. YV, Ānandāśrama edn. for Tai. Ār., Kāśī edn. for ŚB, Calcutta edn. for TB, besides SARUP's edn. for Mādhava's comm. to ṚV, and PANSIKAR's and WEBER's edns. for the White YV, with the commentaries of Uvaṭa and Mahīdhara.

arya'- (1) : Sāyaṇa to ṚV 1.33.3 and AV 6.63.4
Uvaṭa and Mahīdhara to Mādh. Śuk. YV 26.3.

árya- (2) : Uvaṭa and Mahīdhara to Kāṇ. Śuk. YV 28.1.3 = Mādh. Śuk. YV 26.2.
Sāyaṇa to Tai. Ār. 1.27.6
Bhaṭṭa Bhāskara to "

aryâ- (3) : Sāyaṇa to ṚV 1.123.1-c and Tai. Br. 2.6.6.2
Bhaṭṭa Bh. to TS 1.8.3.1 = VS 20.17 = TB 2.6.6.2

The traditional scholiasts have thus maintained consistency in strictly adhering to Pāṇini's description. But in his commentary to Tai. Ār. 1.27.6 (nṛ́ muṇantu nṛ́ pātv áryaḥ), [14-a] the barytone ought to have been rendered as vaiśya to maintain uniformity, but Sāyaṇa translates the vocable in the passage as ' lord ' (*svāmī*).

IV. Vishva Bandhu's notes :

In the *Vaidikapadānukramakoṣa* I (p. 426-7), VISHVA BANDHU (VB) derives *arya*'- (1) from *ar*+√*yā* (>*ya*) + *ac*. The Vedic commentators have strictly admitted the Pāṇinian kṛt suffix-*yat*, but VB has introduced the suffix -*ac* to justify the oxytone, since the accent-marker-C in -*ac* indicates *antodātta* by the accent rule *citaḥ* (P. 6.1.163).[15] But if -*ac* were to be suffixed to the nucleus *ar*-, this would give us an artificial paradigm**aryā*-. The oxytonisation of the word can be best explained by K.'s vārttika (under P. 3.1.103) or by the Phiṭ S. I. 17.

Secondly, VB derives the barytone árya- (2) from**yā* to which he suffixes -*ghañ*, wherein the accent-marker *Ñ* suggests the initial accentuation (*ñitsvara-*) by the rule, " *ñnityādir nityam* " (P. 6.1,.197).[16]. But**ar* + √*yā* + *ghañ* will result in the form* *aryāya*. Even here, Pāṇini's accent rule, " *yato' nāvaḥ* " is sufficient to justify the initial accentuation, just as K.'s vārttika will take care of the Vedic oxytone. Probably motivated by a sense of hypercorrectness for Vedic accentuation, VB attempts to justify the oxytone by reading the suffix-*ac* and the barytone by prescribing the suffix-*ghañ*.

VB treats the grade (3) vocable as a taddhita formation (*ari* + *yat*). Commenting on Ṛg Vedic aryâ (which he reconstructs as * *ar(i)ya* where the -*i*- is not elided, though the rule, " *yasyeti ca*." (P. 6.4.148) teaches the elision of the final -*i*- of a *bha* stem before the taddhita suffixes and the fem. ī), VB accounts for the end-circumflex by relying on the accent rule, " *tit svaritam* (*svaritaḥ*)'

[14-a] Tai Ār. Ed. by R. MITRA, (1872), p. 172

[15] " svāmibhāve vartamānāt nāntarīyapūrvadhātuḥ. kartari ac pratyayaḥ, citsvaraś ca. maulikasthitis tu * ár- + * yá- (<√yā kartari) iti kṛtvā upapadasamāsaḥ upapadaprakṛtisvaraḥ syāt . . . Pāṇinīyaprakriyayā yathāsthitā sauvarī iyam dig anupapāditā satī saṃjñāpramāṇitamātrā tu draṣṭavyā ". VB. op. cit.

[16] " karmaṇi ghañ pratyayaḥ. ñit svaraś ca. maulikashitis tu * ár- + * yá (<yā bhāve) iti kṛtvā bahuvrīhisamāsaḥ pūrvapadakṛtisvaraḥ syāt ".

(P. 6.1.185) which supersedes P. 6.1.213[17]. The purpose behind the supplication of an intermediary *-i-* is to make up the deficiency of a syllable in the third pāda of ṚV 1.123.1 (the metre being *Triṣṭubh*, each pāda must have eleven syllables, i.e. 4 X 11).[18] In exactly the same manner, VB argues that aryâ- in TS 1.8.3.1 should be recast as* ariyâ with the addition of the enclitic *u*, so that the reading "yác chūdré yád * ar(i)yâ u" will take care of the accent on the one hand, and will meet the requirements of metre, on the other. Winding up his discussion, VB comments that *ar(i)ya-* originally denoted 'lordship' and in later times, when sociological conditions affected the changing society, the meaning of the vocable too subsequently gave rise to two pairs aryá and árya-, and this fact should be kept in mind for future research.[19]

V. The position taken by some Western Vedologists :

The origin and semantic distribution of *ari,-arya-* and *ārya-* which must have been preceded by a long and continuous history, have been widely discussed from the beginning of Vedic Studies.[20] BAILEY, to whom we owe many interesting and valuable papers on *Arya Studies*, discusses in a clear and straightforward manner the etymological connections of *arya-* with similar other words in Indo-Iranian language, and arrives at the thesis that the words *arya-*, *ārya-* and others "fit into a system of society of the *Aryan Great House* (italics mine) some time after about 1500 B.C."[21] THIEME, who is well-known to students of Pāṇini and the Veda,

17 "Vyutpattiḥ ? arí + yat pratyayaḥ taddhita iti kṛtvā lakṣyānurodhāt bhasya sato'pivarṇasya lopābhāvaḥ upasaṃkhyeyaḥ. tena *ariyâ-ity asya trackasya tit-svaritavataś ca sataḥ Nairuktaprakriyā yathānirdiṣṭā, dvyackaḥ pariṇāmaḥ syāt".

18 "Chandasto vimānaś ca pāda iha mānam syāt. tad yathā ṚV 1.123.1 ity atra 'Kṛṣṇād úd asthād, * ariyâ víhāyāḥ' ity evam śrāvyamāṇaḥ sanneva traiṣṭubhaḥ pādaḥ sādhīyān pratīyeta".

19 "Svāmitva-sāmānyaparam ca sad * ariya-ity eva uttarottaraghaṭamāna-sāmājika-vaiśeṣya-naighnyena (1) ariyá (2) áriya-iti viśiṣṭha-rūpāntara-yugalatayā paryaṇamsīd ity eṣā api dig bhūyo-vimṛṣṭyai kalpatām".

20 ROTH & BÖHTLINGK, PW, 4478; GRASSMANN WṚV, 115; BERGAIGNE, *op. cit*; OLDENBERG, arí aryáḥ, ZDMG 54, 167-180; BLOOMFIELD, Review article on NEISSER's Zum Wörterbuch des *Ṛg Veda*, JAOS 45; 160-8; DEBRUNNER *Zwei Altindische probleme*, 72-4, in a vol. of East & Ind. Stud. presented to F. W. THOMAS, Ed. by S. M. KATRE & P. K. GODE; THIEME, *op. cit*, and see ZDMG 107, 96 ff; DUMEZIL *ari, aryaman*, JA 246, 67-84: also JA 117, 96-104; RENOU, Études Védiques et Pāṇinéennes II 109-11; Review article on Der Fremd. im ṚV in JA (1938), 332-7; also JA (1939) 280; and BAILEY. *op. cit.* and *Arya* II BSOS XXIII, (1960) 19ff. NB, For Vedic *arya-*, Ir. aire IE * *ario-* 'lord, master', see WALDE & POKORNY, VWIGS I.80; C. D. BUCK Sel., IE synonymns, 19.36; PEDERSEN, 2.32, 100. For MIA etymological connections, see R. L. TURNER, A Comp. Dict. of IA Langs., I (1962), 61

21 BAILEY, op. cit., 115

has demonstrated a philological interpretation of *ari-*, *arya-* and *aryaman-* in his thought-provoking book, *Der Fremdling im Rigveda.* By a detailed and methodological investigation (which is characteristic of him) of several Vedic passages, THIEME throws open the hypothesis that *arya-* should mean (i) one who protects a stranger (*Fremdlingbeschützend*), (ii) hospitable, (*gastlich*), (iii) a hospitable master (*gastliche Herr*) and (iv) Master (*Herr*). The idea of *Herr* could have simply evolved from *Fremdlingbeschützende.*[22] Making use of the evidence furnished by Paṇini and K. for fixing the meaning of *arya-* as ' one who protects the stranger ', he points out that the term vaiśya should refer to house (*Haus*), settlement (*Niederlassung*; cf. *viś-*, *véśa-*, *véśman-*).

A study of the occurrence of *arya-* in the Saṃhitā texts indicates that the oxytone is older than the paroxytone. Posing the question as to how the barytone could have developed from the older oxytone (*arya'-*), THIEME answers that the *Anfangsbetonung* in árya- has come from the vocative, (Woher die Anfangsbetonung ? Die Antwort liegt, meine ich, recht nahe : Sie stammt aus dem Vokativ)[23]. That the vocative form can very easily occur straightaway in a conception is characterised by *a'rya-*. He attributes this to a parallel development in related languages (for e.g. Fr. *monsieur, madame*; Eng. My Lord, My Lady; Dut. *mijnheer*; Old. Eng. *mine host*).

From Pāṇini's rule of vocative accentuation (*āmantritasya ca,* P. 6.1.198), we understand that the vocative, if accented, receives the acute on the first syllable. If we assume that there was the shift of accent from the oxytone to the barytone through the vocative, this hypothesis should rigorously be tested in all the available contexts in which the paroxytonisation of the oxytone has taken place, before one can accept THIEME's explanation.

VI. a) Conclusion :

The foregoing analysis of *arya-* in Pāṇini and the Veda leads us to the following careful considerations :—

1. According to Pāṇini's description, *arya-* would convey the meaning ' master ' and ' a vaiśya ', and the vocable is a paroxytone.

2. Phiṭ S. I. 17 has oxytonised *arya-* in the sense of ' lord '.

3. K. was aware of the profuse occurrences of the oxytone in the Vedic texts, and hence he introduced the accentual note under P. 3.1.103, thereby restricting the meaning of *arya'-* to ' *svāmin* '.

4. The paroxytone is not attested in ṚV, TS, SV and AV; it (árya-) occurs mostly in the *Kāṇva* and the *Mādhyandina* recensions of the White YV, with the exception of a single passage in *Kāṭha.* S. 38.5 which reads *a'rye.* Further, it is recorded in three examples in the Brāhmaṇa and Āraṇyaka texts. If Uvaṭa and Mahīdhara were right in interpreting *a'rya-* in VS 26·2 (= KS 28·1.3) as vaiśya- a sense which Pāṇini has expressely taught for this vocable, will this then suggest the possibility that *Pāṇini was familiar with the White* YV *School,* inasmuch as he

22 THIEME, *op.cit.*, 96

23 *ibid.*

knew the *Black* YV *School*? THIEME has forced the hypothesis on us that " we cannot help but arrive at the conclusion that Pāṇini *did not draw* (italics mine) upon the White YV. Goldstücker was right here "[24]. But WEBER has endeavoured to show that Pāṇini actually refers to the White YV.[25]

5. The traditional commentators have interpreted the word *arya-* in the light of Pāṇini, K. and the author of the Phiṭ sūtras.

6. The question that one will be tempted to ask is why Pāṇini has not taught a separate rule for fixing the *antodātta* in *arya'-* which has entered the Vedic vocabulary about 61 places ?

VI. (b) Patanjali's evidence :

It is difficult to expect a final solution to this problem. But a fair answer is indirectly suggested by Patañjali who is the final authority on the views expressed in the *Aṣṭādhyāyī*. In his scholarly commentary on the sūtra, " *vṛddhir ād aic* " (P. 1.1.1.), Patañjali introduces a discussion whether *guṇas* are differentiating (*bhedakāḥ*) or non-differentiating (*abhedakāḥ*). Pāṇini mentions the word *udātta* in one of his rules, " *asthidadhisakthyakṣṇām anaṅ udāttaḥ* " (P. 7.1. 75), thereby indicating that *guṇas* are non-differentiating elements. If they were differentiating, he (Pāṇini) would have distinctly read the words with the acute accent in the sūtra itself. Patañjali, then goes on to show that " the *guṇa* which is specifically mentioned along with the object serves as a differentiating element (*āśrīyamāṇo guṇo bhedako bhavati*)"[26]. For instance, if one were to be asked to tie a white animal to the stake, certainly one should not tie a black animal to it (the stake).

From this intelligent discussion, it follows that in places where Pāṇini distinctly mentions the udātta accent, the acute should be understood. As a matter of fact, the rule " *aryaḥ svāmivaiśyayoḥ* " is of a general nature, its purpose being to teach the significance of the word *arya-*; it should not, therefore, be taken for granted that Pāṇini was completely unaware of the oxytone which has played a prominent role in Vedic Lexicography.

Finally, it is the firm conviction of Patañjali that a comprehensive knowledge arises from the commentary (which is the interpretation of the learned by the learned) in all matters of doubt. Hence the oft-quoted *Mahābhāṣya* dictum, " *vyākhyānato*[27] *viśeṣapratipattiḥ na hi sandehād alakṣaṇam* ", should become the guiding principle in the skilful interpretation of particular Pāṇinian problems.

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24 *Pāṇini and the Veda*, 74

25 *Ind. Stud.* 5, pp. f, 57 ff.

26 SASTRI, P. S. S., *Lectures on the Mahābhāṣya* I, 200

27 According to Nāgoji, *vyākhyāna* means " an interpretation that (does not hunt for *jñāpakas* by applying interpretative devices, but) hunts for that which is to be defined (by the definition of the grammar of Pāṇini, i.e. the good speech usage of the (*śiṣṭha*) ". See THIEME, *The Interpretation of the learned*, S. K. BELVALKAR Comm. vol., p. 61.

BOOK REVIEWS

An early History of Vaisali, (from the earliest times to the fall of the Vajjian Republic circa 484 B.C.) MISRA YOGENDRA, Motilal R Banarsidass, Delhi-6. 1962. Price Rs. 15.

Ancient historical sites in India have received close attention from research workers for a long time. Cities like Rajagriha, Kanauj, Varanasi have been studied. Vaisali has every reason to be chosen for study, as it occupies an important place in the early history of India. The author has successfully accomplished his aim of dealing exhaustively with the information available from Brahmanical, Jaina and Buddhist sources.

This work represents a substantial part of the author's thesis for which the University of Patna has awarded him Ph.D. degree in 1957.

The book is divided into three parts. Part I deals with 'Monarchy' on the basis of ancient Indian historical traditions. Part II offers an interlude between Monarchy and Republic. Part III narrates the political history of Lichchavis, the history of the Buddha and Buddhism in the Vajjian Republic, progress of Buddhism in Vaisali, the story of Mahavira and Jainism in the Vajjian Republic, the social conditions and fall of the Vajjian Republic.

Great importance is attached to the religious history of Vaisali. It occupies an exclusive place in Buddhist history for the foundation of the order of nuns. Mahaprajapati Gotami came with five hundred Sakyan women from Kapilavastu to obtain permission for women to give up the household life and enter the homeless state under the doctrine and discipline proclaimed by Lord Buddha. The author has given the traditional history of the kings of the Vaisali region from Nabhanedistha to Sumatı. He has studied critically the geographical and political information furnished by Buddhist literature. Instead of giving genealogical lists of kings and mentioning political events, he devotes special chapters to the administration and religious activities. Then he takes up the detailed history of the Vajjian Republic which represents the most glorious period of the history of north Bihar. After mentioning the constituent clans of the Vajjian Republic, he describes almost all the important Buddhist converts like Nandaka, Siha, Ambapali etc. We know that Jainism is closely associated with Vaisali. Vardhamana Mahavira was born at Kundapura near Vaisali. The author has critically discussed the date of Mahavira. Lastly he deals with the fall of the Vajjian Republic. This was destroyed by Ajatashatru, the king of Magadha. The historicity of this event has been discussed.

The author rightly says that *Prehistoric* remains in the Vaisalivideha are completely absent. In determining the history of Vaisali, he has not ignored the

archaeological evidences. In March 1958, a flat low-stupa was excavated by the late Dr. A. S. ALTEKAR who identified it with one of the original relic-stupas of the Buddhas built by the Lichchavis in the first quarter of the 5th century B. C.

There are some typographic errors but *up to date* bibliography and index have greatly increased the value of the book. Suitable maps and illustrations would have increased it still further.

S. GOKHALE

Ajanta, Ellora and Aurangabad Caves, GUPTE R. S. and MAHAJAN B. D., D. B. TARAPOREVALA Sons and Co. Private Ltd. Treasure House of Books, Bombay 1, 1962. Rs. 70 = 00, Pages 288, Plates (colour) 12, (monochrome) 150.

No student of Indian art could miss the publication of a work devoted to Ajanta or Ellora. One could not and should not miss this one at least. The authors seem to have kept before them a very practicable objective viz. a detailed introduction to the cave temples at Ajanta, Ellora and Aurangabad. Ecstatic rhapsodies are going by the dozens these days. It is therefore, refreshing to find that a plain, matter of fact record has been brought forth by competent persons. The authors have given all the data and background material that would enable a reader to understand and appreciate the art at these places; but they have refrained from the too common eulogies. Of course, this does not mean that the authors have not responded to the beauties of the cave temples, what is important is, they have never lost their balance.

The scheme followed in the work is well thought out and well executed. Ajanta, Ellora and Aurangabad, each has received separate attention through independent sections. Before each section a detailed description of the political, social and religious background of these places and sects is given. So also, the lives or legends regarding the chief deities of each sect, a historical narrative of the development of each sect, the various art forms and their variations have received reasonable attention. Thus before embarking on this 'paper-Yatra' of Ajanta and other places, the reader would be fully conversant with the life of the Buddha, various Jataka stories, the Hinayana and Mahayana sects, the Puranas the iconogrphy of these various sects and so on. Also available is a short discussion of the art traditions of the place concerned.

This is followed by a cave by cave description of each place. The beauty and charm of Ajanta and Ellora are proverbially beyond the power of words. It is just pardonable therefore, if the authors found themselves using the same terms, expressions and adjectives all too often; too many beautiful objects are to be described over and over again. This has led to a certain amount of monotony in the text, but that is not only inevitable but excusable.

The descriptions are supplemented by numerous photographic reproduc-

tions of the contingent parts of the caves. A number of frescos are reproduced in colour. Almost all the famous pieces of sculpture and many of the more well known paintings are represented. However, this side, viz., that of illustrations, leaves much to be desired. Such criticism as the quality of the printing of the half-tone blocks etc. though pertinent is formal. It deals only with the form. It is the other aspect, the selection of the illustrations, of which something could be said. About the printing etc. the authors could hardly be held responsible; but about the selection they certainly are. Except a few photographs like the ones on plates II, XXII, XXIII, etc, views of the caves that would enable the reader to get before his mind's eye an overall picture of the chaitys and vihars are lacking. The authors seem to have practically neglected this side. Again the device of reproducing plans, elevations, and such drawings has been only too sparsely used. The authors could have very profitably copied YAZDANI's splendid idea of showing the positions of the frescos on the various walls, for, verbal directions are at best insufficient, at worst confusing. To put in short, the authors have underestimated the value of instructive illustrations in a descriptive work of this sort.

The inclusion of the chapter on erotic sculpture in Indian Art is something that baffles one. The proportion and quality of and the emphasis on erotic sculpture at these places is meagre and the authors are hardly justified in devoting one full chapter to this subject. In fact they have tried to explain something that hardly attracts the notice of the visitor or a student. Most of what they have to say relates to erotic sculpture in general rather than anything particular at these places. This greatly distorts the perspective, as too much emphasis is laid on an aspect that does not deserve it.

However, one would find little difficulty in agreeing with Shri SIVARAMAMURTI when he says "The authors have produced in one handy volume a fine book describing the worderful material at Ajanta, Ellora and Aurangabad. "

M. S. MATE

NANAVATI J. M. and DHAKY M. A., "The Ceilings in the Temples of Gujarat" *Bulletin of the Baroda Museum and Picture Gallery*, Vols. XVI-XVII, Baroda, 1963, Rs. 20-00

Studies in architecture are none too popular today. The older generation of BURGESSES and COUSENSES has done so much work that one begins to feel that perhaps BURGESS was not quite wrong when he said that much of the work was completed and that the days of the Archaeological Survey were numbered. As the work under notice conclusively indicates this was a superficial impression gathered on the basis of superficials. Amongst the few scholars who still persist in studying architecture, the present ones do not subscribe to this view that everything was already done. It is a keen awareness that the formal records of the earlier students were miles apart from the (formless) knowledge of the *shilpa-shastras*

that has actuated the authors into this attempt at a better appreciation of the ceilings or *vitanas* of the Gujarat temples. In this monograph, Shri NANAVATI and Shri DHAKY have attempted to bring together the texts on *shilpas* on the one hand, and the temples on the other. One very important factor in their favour is that they are discussing monuments and texts that are not far removed from each other in respect of time and also space.

The study begins with a quick survey of the various types of ceilings that occur throughout the entire Peninsula. Next comes a narration of the classes and components of the *vitanas* as envisaged by the *shilpa-shastras*. These various parts they have illustrated with the help of existing celings at various places throughout Gujarat. Previous students like MANKAD and SOMPURA have discussed these classifications. But the present authors enjoy one great advantage, the intimate knowledge of the temple architecture of Gujarat from the earliest times to the most recent. This has enabled them to give tolerably acceptable interpretations of various textual prescriptions and the corresponding architectural features.

The *shilpa-shastras* prove to be of any use only in a limited sense. That limit is very well defined by the absence of any linear definition of their arguments. Nowhere does one come across a text which is illustrated. It is only through words that everything is to be learnt about a science that is essentially visual. And words have a nasty habit of acquiring various meanings and connotations at various periods and in various regions. This brings in the baffling factor of interpretation and in a province like architecture where everything is so precisely defined, interpretations of this sort have little scope. However, things being what they are, one cannot escape them. It is here that the chief merit of the present work lies. The authors have most carefully brought theory and practice together and thereby led to a better understanding of both. It is to be hoped that the authors would follow up this short essay with discussions regarding the temple structures as a whole.

The authors have discussed the *vitana* with reference to the texts. Some more light could be thrown if they also discuss the structural development of the *vitanas*. In other words, one would like to know whether their basic forms have come about in obedience to textual precepts or because of structural requirements. Or, in still other words, one would like to know whether the texts explain the monuments or *vice versa*. Since they have all the requisite data with them the two authors are in a very good position to discuss this angle also and sooner it comes the more welcome it is.

M. S. MATE

DHAKY M. A., The Chronology of the Solanki Temples of Gujarat; *Journal of the Madhya Pradesh Itihas Parishad*, Bhopal, No. 3, 1961

Number three of the *Journal of the Madhya Pradesh Itihas Parishad* is devoted

entirely to Shri DHAKY's discussion of the Solanki temples and as such could easily be treated as a monograph. The days of the 'general survey' or 'acquaintance' with Indian architecture are long since over. So are the times, when words of BURGESS or COUSENS were accepted as 'Gospel truths'. Numerous texts and a lot of new epigraphic evidence has come to light since. And the accent is now from the extensive to the intensive. Shri DHAKY's paper is in the nature of the latter. The aim here is to understand better rather than to know more. Admittedly, a short notice like this could hardly be the place to go into any detailed discussion. However, a few points might be mentioned that would occur to a general student of Indian architecture. What would be the points that a student of the architecture of Gujarat might raise is a thing beyond the writer of the present notice. But some general points could be made out. When dealing with the genesis of the Gujarat style, the author has emphatically stated that this style and the Saurashtra style have no generic relationship, at least in the early stages. A detailed description and discussion of the Saurashtra temples *vis a vis* their cousins in Gujarat is a thing that would be welcome. In fact, it is needed. For, to a casual observer, even the earliest known Saurashtra monuments have features like the Chaitya-arch motif both on the Shikhars as well as on the mouldings. These had an 'all-Hindustan' currency. Geographically, things originating on the mainland could reach Saurashtra only through Gujarat or conversely things originating in Saurashtra could come to the mainland via Gujarat. As such this area cannot be treated as being immune to forces affecting Saurashtra or forces spreading out from that land. The case of Southern Deccan is not too different from Gujarat. It stood between the North and the South and was open to influences from both these areas as is exemplified in the architecture of that region. Aihole and Pattadakal are a living testimonial to this process. And if parallels are found in such distant areas as Khajuraho, one may expect to find some similarities with Saurashtra, unless of course, a cultural seclusion is envisaged. The second important point is-it is an observation that is applicable to the same author's work on the *Ceilings of the Temples of Gujarat*, about which a few words are included in this *Bulletin*-that the use of Saṁskṛta and Prākṛta words from texts to refer to particular components or styles of temples would perhaps hinder the 'Better Understanding' as far as readers are concerned. There is no doubt whatsoever that the author has used them after ascertaining that they mean what they say. But it is common knowledge that there are variations in the use of even technical terms in various regions and at different times. Secondly the practice is hardly as old as yesterday and therefore a visual definition of the sense implied in a term is of the utmost significance. Otherwise the entire paper would be useful only to a handful of people. It is to be emphasised that an illustrated dictionary of these terms is a crying need of the day if we are going to bring them back as currency. The author of the present monograph is indeed a man to do so. Earlier he obliges the students the bettet.

As far as the main argument that is developed, its most noteworthy character is the minute precision with which all the facts are marshalled and the data com-

pared. As the latest and most thorough study of the chronology of the Gujarat temples erected under the Solankis, the monograph is a valuable addition to the study of the cultural life of Gujarat.

It is hoped that the author would act on the suggestions made in these lines and help the relatively uninitiated students to enjoy the fruits of his painstaking researches.

M. S. MATE

Stratification for the Archaeologist : EDWARD PYDDOKE, Phoenix House Ltd., London, 1961. pp. 124, 8 plates and 14 illustrations. Price 30 s.

The study of archaeology is becoming increasingly dependent on a number of natural and physical sciences. A non-technical person going through the archaeological reports finds a host of technical and scientific terms that he would find difficult to follow. There are very few books which can introduce archaeologists to these diverse fields of sciences. Phoenix House have done a very good job in this direction by publishing books like *Soils for the Archaeologist* and *Bones for the Archaeologist*. The book under review is one more addition to this series.

The word 'stratification' has beeen selected for inclusion in the title to differentiate it from the more familiar word 'stratigraphy'. Stratification describes the natural processes which make the 'strata' in which archaeological antiquities are found, while 'stratigraphy' refers to the description of strata. This book attempts to introduce the beginner and the so-called library and museum-minded archaeologists to natural, geological and other processes which go to make up different strata.

There are in all twelve chapters in this book; out of which eight are devoted to geological agencies such as the sun, air, rain, wind, frost, lakes, sea, streams etc., two to the effect of flora and fauna and the last two to human settlement. In the first chapter on 'Geological and Geographical Background' the author has shown, with the help of numerous examples from Britain, how important it is for an archaeologist to have a thorough background of these sciences for understanding environments, trade-routes, cultural contacts and the causes of human settlement at a particular site of early man. In the next seven chapters the author has described, without going into much detail, the general role played by the sun, air, wind, frost, sea, lakes and streams as denuding and depositing agents. He has explained the locss formation, soil profiles, stalactite-stalagmite, solifluction, boulder clays, moraines, eskers, varve sediments, pollens, raised beaches, sea-level, changes, deep sea sediments, river terraces etc., in a very simple non-technical language. The chapters on the flora and fauna, and human settlement are interesting and instructive.

The final chapter on 'Interpretation' contains advice for excavators. Some of this is very valuable. Excavators have been asked to record adequate descrip-

tion of deposits with their tentative interpretation while excavation is in progress. As there cannot be a ready-made handbook for the detailed interpretation of strata and stratification, a beginner has been advised to acquire a skill and ability to observe in the field under an experienced excavator who is familar with local rocks and soils. The interpretation of gravels, sands and silts, in which remains of early man are found, should be mainly based according to the author, on geological observations and these layers should not be dated by referring to the type of implements found in them.

The author has suggested that strata of human habitational site should be numbered in the order of their deposition. The writer of this review feels that it is possible only after the excavation is complete and when the complete 'stratigraphy' is known. The field number of the layers will therefore be in the reverse order. Hence giving two different sets of numbers to all finds will complicate the the matter and unneccessarily increase the work. In the end the reader has been rightly warned about Carbon-14 dating without careful sampling. C-14 cannot replace the patient field work of the geologist and the archaeologist. It should be used rather as a confirmatory test.

The book on the whole is very useful to a beginner in archaeology, especially to a student of Old Stone Age. This will stimulate their interest in the natural processes that make different 'strata'. However Indian students will find many difficulties when applying their knowledge of stratification gained in this book to our river deposits and habitational strata because of very different environments. Some of the technical terms like C-14, river capture (Fig. 9a, p.71) should have been clearly explained before introducing them to a beginner in archaeology. Page numbers from 68 to 71 are missing in the copy that has come to us. Index, restricted solely to place names, appears incomplete. The book is well illustrated. It has been foreworded by Prof. S. W. Wooldridge, the distinguished professor of Geography in the University of London.

S. N. RAJGURU

[BDCRI]

Bulletin of the Deccan College Research Institute.

Number 23

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ALEXANDER K. C.

Evolution of the concept of Functional Imperatives in Talcott Parsons' Sociological Theory.

BDCRI, 23, 1-10.

The concept of Functional Imperatives of *Talcott Parsons* is an emergent product of cumulative theoretical development in sociology and represents a mile-stone in its progress. The four Functional Imperatives have universal validity and can be used as a tool for the analysis of any social system.

BALASUBRAHMANYAM M. D.

The Accentuation of Arya- in Pāṇini and the Veda.

BDCRI, 23, 94-100

The paper attempt sto examine the accentuation of *arya*—according to (1) Pāṇini and Pāṇinists, (2) the Vedic system, (3) Vedic commentators, (4) VISHVA BANDHU, (5) some Western Vedologists and draws a probable conclusion on the accentuation of the word.

DAMLE Y. B.

Reference Group Theory with regard to Mobility within Caste.

BDCRI, 23, 11-22.

It is customary to presume that Caste System precludes any possibility of Mobility whatsoever. On the other hand with all the industrializing processes at work in the country it is quite legitimate to expect Mobility in the Caste System. In this article a frame of reference has been developed for the analysis of Mobility within the Caste System, using Parsonian theoretical framework and Merton's concepts.

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JAMKHEDKAR A. P.

Cultural Ethnography from Vasudevahindi.

BDCRI, 23, 36-56.

In this paper, the personal names from Vasudevahiṇḍi, a Jaina Prākṛt work of 5-6th century A. D. have been studied. An attempt has been made to classify the names and their suffixes in the light of the information furnished by another Jaina work, Anuyogadvarasutra. A lot of interesting information about the system of naming persons from various walks of life and about the beliefs about it, is to be had. This information has been further corroborated, wherever possible with evidences from the epigraphs.

MATE M. S.

A Note on some Wall Patterns.

BDCRI, 23, 23-30.

This is a notice of some brick-work designs common during the last three centuries in Maharashtra. This mode of decoration was more common in the rural areas, but some urban centres also developed a separate idiom of it.

MUJUMDAR G. G. AND RAJGURU S. N.

Early Mining and Metallurgy in Rajasthan (Part I).

Copper Around Udaipur

BDCRI, 23, 31-33

The presence of large number of old copper workings and heaps of slags around Udaipur and occurrence of slags and copper objects in a purely Chalcolithic horizon in Ahar excavations indicate that the Chalcolithic people at Ahar probably utilised the locally available copper ore for the extraction of copper metal.

MUTATKAR R. K.

Caste, Leadership and Group Dynamics — a case study.

BDCRI, 23, 83-93

The study of factions in an Indian village provides ample opportunities to understand the interplay of various forces released by the launching of democratic institutions like the panchayats for developmental activities. This paper deals with intra-caste and inter-caste rivalries, traditional and modern. Adult franchise has made it imperative for the higher castes to get the support of the lower castes, which otherwise would have been neglected. The study of pre-Independence and post-Independence periods clearly indicates changes in leadership indices, in view of the new symbols created by welfare activities.

NAGARAJA RAO M. S.

Recent Explorations in the Tungabhadra Basin — The Chalcolithic phase.

BDCRI 23, 55-77

The Chalcolithic remains in the Dharwar district are reviewed here in the light of the recent explorations in the Tungabhadra basin. The important factor is the discovery of white painted *black-and-red ware*. An attempt is also made to link the Chalcolithic cultures of northern Deccan with the southern on the one hand and the Chalcolithic and the Megalithic cultures on the other.

NAGARAJA RAO M. S.

Aṣṭamātṛkās from Haveri

BDCRI, 23, 78-82

In this paper the author discusses a panel on the ceiling of the Siddheshvara temple in Haveri. This depicts the aṣṭamātṛkās. The eighth one is tentatively identified by the author as Yogeshvari and not as Brāhmi as COUSENS has done. The sculpture is unique in the sense that it represents in the centre Śiva in Gajāsura-Saṁhāra form.

Rajguru S. N. and Mujumdar G. G.
Early Mining and Metallurgy in Rajasthan (Part I), Copper Around Udaipur.
BDCRI, 23, 31-33.
The presence of large number of old copper workings and heaps of slags around Udaipur and occurrence of slags and copper objects in a purely Chalcolithic horizon in Ahar excavations indicate that the Chalcolithic people at Ahar probably utilized the locally available copper ore for the extraction of copper metal.

Sali S. A.
Probable use of certain Chalcolithic Terra-cotta beads.
BDCRI, 23, 34-35
Beads of terra-cotta were recovered from the Chalcolithic layers in the excavations at sites in Khandesh like Prakashe and Bahal. These beads might be net-sinkers as are currently used in the area, and not ornaments as is supposed to be the case.

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